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THE BIZARRE.

NOTES AND QUERIES

A MONTHLY MAGAZINE OF

HISTORY, FOLK-LORE, MATHEMATICS MYSTICISM, ART, SCIENCE, Etc.

"It neither speaks nor hides, but signifies."—*Hereclitus.*

Vol. VI. JANUARY, 1889. No. 1.

ONE DOLLAR A YEAR IN ADVANCE.

CONDUCTED AND PUBLISHED BY

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MANCHESTER, N. H.

1888.

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Publishers' Notice.—Notes and Queries.

All $uch of our $ubscribers as have not $ettled their $ubscription for the year 1888 will please $can these lines and $atisfy themselves if these $everal lines are designed for them. Each one can $ee that the $ecret of $uccess of one's life is to $ecure a $atisfactory living. Call into our $anctum and $ee us.

Several hundred sample copies of this number are sent out to persons who may possibly be interested in this field of literature, and if any want this magazine one year, they are invited to send us $1.00.

We will present Vol. I, Nos. 1-20 (except Nos. 8-9) to every *new* subscriber for Vol. VI, 1889, in the order received, as long as the surplus volumes pan out, if such new subscribers request it.

These volumes can be supplied in numbers at the following prices :

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[Historic Magazine]

MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

VOL. VI. JANUARY, 1889. No. 1.

" Yew, those who know virtue are few."—CONFUCIUS.

Remarks.

Only a few words are necessary at the beginning of this volume. It is sometimes a hard task to steer between Scylla and Charybdis. One desires more articles on folk-lore and less on science, while another says those on science in general are too abstruse; several more announce that they are studying the ancient religions, having been drawn to them by the many references to, and quotations from, them in these pages.

A more than ordinary interest has been awakened in arcane subjects, remarkable phenomena, fantastical literature, bibliography, and so forth; and many questions have been received on these singular matters, which will appear in the current volume.

As fantastic as many of these subjects seem to be, they lie at the foundation of nearly all secret societies and religious systems; and the literature of this age is bringing to light much that has been hidden for ages. "Let there be light." Go on and light will come you.

A very copious index to these entire volumes has been prepared by Albert R. Frey, New York, an experienced indexer, which we design to publish the present year in pamphlet form, in uniform size with NOTES AND QUERIES, thus giving to all those who possess the full set a quick reference to all matters therein.

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TOUR OF THE CHESS KNIGHT. (Vol. V, p. 212.) This subject has been discussed in these pages (Vol. II, pp. 397, 473). According to the *Pródromus* in the bibliography appended to S. S. Haldeman's "Tours of a Chess Knight," the earliest attempt to form a knight's tour, accompanied by a definite date, seems to be that of a manuscript by Paulus Guerinus in 1512, and fills only half the board. Gianutio in 1597 also performed the tour on half the board, but as his can be inverted on the other half of the board and properly connected, he essentially solved the problem. Since 1597 many others have performed the tour in different ways, among them several of the noted mathematicians of Europe. When the tours are lined they form very elegant designs, and are easily distinguished from each other.

The following is a six-line quotation from Shakespeare. Each syllable occupies a square, and follows in succession according to the knight's move on the chess board. What is the quotation, and where is it found in Shakespeare's works?

on	heav	per	o	seek	te	is	to
a	ex	the	ous	nish	let	to	beau
en	fume	of	cess	vi	the	smooth	waste
lous	throw	the	gar	eye	light	gild	ice
rain	to	cu	gold	to	the	ful	per
to	to	li	o	with	ed	or	re
the	bow	hue	di	to	an	ta	and
un	ly	paint	or	ther	ri	fin	add

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S. S. Halderman's "Tours of the Chess Knight" contains 114 diagrams; and his bibliography on the subject names 64 authors and articles (1500-1864), with 34 diagrams. Total pages 132. "Dedicate to GEORGE ALLEN author of a life of Philidor."

George Walker's bibliography, appended to *The Philidorian*, a magazine of chess and other scientific games, contains 40 octavo pages, including 420 authors and articles, down to 1838.

M. J. Hazeltine, a chess editor of New Hampshire, has a fine library on chess, containing 340 volumes, 200 pictures, prints, and photographs; 7,705 problems, 4,004 enigmas, 9,295 games; the three latter items displayed on 10,276 pages.

Dr. A. Vander Linde's bibliography, recently published at Utrecht, contains 2,209 titles, besides 113 titles on checkers.

YEAR OF CONFUSION. (Vol. II, p. 527.) This phrase was applied to the reformation of the calendar undertaken by Julius Cæsar, which reform was a great improvement on the previous calendar. Cæsar called on Sosigenes, an astronomer, to rectify the discrepancy, that is, adjust the difference between the the civil and solar year, to prevent future errors. It was determined to make January 1 of the Roman year A. U. C. (*Anno Urbis Conditæ*) 709, which was B. C. 45, coincide with January 1 of the solar year. Two intercalary months of 67 days were inserted between the last day of November and the first day of December of the year A. U. C. 708. An intercalary month of 23 days had already been added to February of that year. Hence, the Roman year A. U. C. 709 was made to consist of 445 days (*i. e.* $355+23+67=445$). That year was scoffingly called "the year of confusion," or more justly it should be named, as Microbius observes, "the last year of confusion." To prevent future errors the year was lengthened from 355 to 365 days, each month except February being lengthened by one or two days, nearly alternately, according to the rule we now observe. The Gregorian calendar obviated an error in the Julian calendar by not making every fourth century a leap year. Gregory XIII ordered that every fourth century beginning with 2000 should not be a leap year, which obviates all errors for many centuries to come.

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The Greatest Magic Square Extant.

BY WILLIAM BEVERLY.

In veiw of the great interest that is manifested in that mysterious subject, the magic square, we present what is probably the finest and the most perfect example extant. It was made by the most distinguished chess-player of England.

260	260	260	260	260	260	260	260	= 2080
1	30	47	52	5	28	43	54	= 260
48	51	2	29	44	53	6	27	= 260
31	46	49	4	25	8	55	42	= 260
50	3	32	45	56	41	26	7	= 260
33	62	15	20	9	24	39	58	= 260
16	19	34	61	40	57	10	23	= 260
63	14	17	36	21	12	59	38	= 260
18	35	64	13	60	37	22	11	= 260

This square illustrates the Knight's Tour over the chess-board, in the game of chess, in which the knight plays to every square on the board, and touches it but once.

Every line of figures running up and down sums up 260.

Every line of figures running right and lelt sums up 260.

Divide the board into four quarters; then the rows and files of each quarter will sum up 130.

Divide the board into sixteen equal parts; the numbers that compose each sixteenth part will sum up 130.

It also follows that any sixteenth portion of the board, added to any other sixteenth portion, will sum up 260.

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It also follows that any half row or file, added to any other half row or file, in the entire square, will sum up 260.

Take the files of numbers running up and down ; the four central numbers of the file will sum up 130 ; and so of course the four remaining or outer numbers will sum up 130.

These are only some of the wonderful properties of this mysterious square. This is really a *magic square* ; and incomparison, the ordinary square by this name sinks into insignificance.

MULTIPLICATION OF ROMAN NUMERALS. How did the ancients perform multiplication before the invention of the Arabic figures?

EGBERT LORD.

This question has waited a year for a reply. We will give an example, that of multiplying 1791 by 53, taken from an unpublished letter of Baron Maseres to the Rev. William Birche, in the possession of J. O. Hallowell, Esq., Jesus College, Cambridge, England. See Thomas S. Davies' " Solutions to Charles Hutton's Course of Mathematics," 1840, p. 5. It is as follows :

1791 is MDCCXCI, and 53 is LIII. Therefore, 1791×53 is

=MDCCXCI×LIII
=LIII×M+LIII×D+LIII×CC+LIII×XC+LIII×I
=LIII×M+XXVI×M+I×D+L×CC+III×CC+LIII×L
+LIII×XL+LIII
=LXXVIIII×M+D+(L÷D)×X×CC+DC+XXVI×C+I
×L+LII×XL+I×XL+LIII
=LXXVIIII×M+D+V×II×M+DC+XXVI×C+L+CIV
×XX+XL+LIII
=LXXVIIII×M+D+X×M+DC+XX×C+VI×C+L+C
×XX+IV×XX+XL+LIII
=LXXXVIIII×M+MC+II×M+VI×C+L+II×M
+LXXX+XL+LIII
=LXXXXIV×M+VII×C+L+CXX+LIII
=LXXXXIV×M+VIII×C+L+XX+LIII
=LXXXXIV×M+IX×C+XXIII
=LXXXXIV×M+DCCCC+XXIII
=XCIV×M+DCCCC+XXIII
=94923

Query : Whether this is the way in which Cicero or Varro would have multiplied 1791 by 53.

THE FIRST BAND OF MINSTRELS ever formed consisted of four persons : Dan. Emmett, Wm. Pell, Frank Brower, and Wm. Whitlock. They performed in New York in 1842.

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The Sentence of Jesus.

A COPY OF THE ORIGINAL DECREE AS ISSUED BY PONTIUS PILATE.

A correspondent of *Notes and Queries*, London, extracts from the *Köinische Zeitung* what is called "correct transcript of the sentence of death pronounced against Jesus Christ." The following is a copy of the most remarkable judicial sentence which has ever been pronounced in the annals of the world; namely, that of death against the Saviour, with the remarks that the journal *Le Droit* has collected, the knowledge of which must be interesting in the highest degree to every Christian. Until now we are not aware that it has ever been made public in the German papers. The sentence is word for word as follows :

SENTENCE PRONOUNCED BY PONTIUS PILATE, INTENDANT OF THE PROVINCE OF LOWER GALILEE, THAT JESUS OF NAZARETH SHALL SUFFER DEATH BY THE CROSS. IN THE SEVENTEENTH YEAR OF THE REIGN OF THE EMPEROR TIBERIUS AND ON THE 25TH OF THE MONTH OF MARCH, IN THE MOST HOLY CITY OF JERUSALEM, DURING THE PONTIFICATE OF ANNAS AND CAIAPHAS, PONTIUS PILATE, INTENDANT OF THE PROVINCE OF LOWER GALILEE, SITTING IN JUDGMENT IN THE PRESIDENTIAL SEAT OF THE PRÆTORS, SENTENCES JESUS CHRIST OF NAZARETH TO DEATH ON A CROSS BETWEEN TWO ROBBERS, AS THE NUMEROUS AND NOTORIOUS TESTIMONIALS OF THE PEOPLE PROVE :

1. JESUS IS A MISLEADER.
2. HE HAS EXCITED THE PEOPLE TO SEDITION.
3. HE IS AN ENEMY TO THE LAWS.
4. HE CALLS HIMSELF THE SON OF GOD.
5. HE CALLS HIMSELF FALSELY THE KING OF ISRAEL.
6. HE WENT INTO THE TEMPLE FOLLOWED BY A MULTITUDE CARRYING PALMS IN THEIR HANDS.

ORDERS : THE FIRST CENTURION, QUINTUS CORNELIUS, TO BRING HIM TO THE PLACE OF EXECUTION, FORBIDS ALL PERSONS, RICH OR POOR, TO PREVENT THE EXECUTION OF JESUS. THE WITNESSES WHO SIGNED THE EXECUTION AGAINST JESUS ARE :

1. DANIEL ROBANI, PHARISEE,
2. JOHN ZOROBABEL,
3. RAPHAEL ROBANI,
4. CAPET.

JESUS TO BE TAKEN OUT OF JERUSALEM THROUGH THE GATE TOURNEA.

The sentence is engraved on a plate of brass in the Hebrew language, and on its sides are the following words :

"A SIMILAR PLATE HAS BEEN SENT TO EACH TRIBE."

It was discovered in the year 1620 in the city of Aquill (Aquilla)?

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in the kingdom of Naples, by a search made for the discovery of Roman antiquities, and remained there until it was found by the Commissaries of Art in the French Army of Italy. Up to the time of the campaign in southern Italy, it was preserved in the sacristy of the Carthusians, near Naples, where it was kept in a box of ebony. Since then the relic has been kept in the chapel of Caserta. The Carthusians obtained it by their petitions that the plate might be kept by them, which was an acknowledgment of the sacrifices which they make for the French Army. The French translation was made literally by members of the Commission of Arts. Denon had a fac-simile of the plate engraved, which was bought by Lord Howard on the sale of his cabinet for 2000 francs. There seems to be no historical doubt as to the authenticity of this. The reasons of the sentence correspond exactly with those of the Gospels.

WERE THERE TWO CHRISTMASES OR ONE IN 1753? Nathaniel Ames's Astronomical Diary or Almanac for 1752 gives that year 366 days, while the English almanacs give that year 355 days. New Englanders did not seem to obey the Act of Parliament, changing from old style to new style, throwing out 11 days from the year 1752, in this manner: the 3d of September was called the 14th, thus reducing that month to 19 days. Ames makes no such change, but gives each month its usua l quota of days. But in his almanac for 1753, he says the year begins on Monday, which answers to the 21st of December, 1752, thus knocking out the 11 last days of December. It would be interesting to me to know whether in reality the New Englanders had any Christmas in 1752. According to their own almanacs their Christmas for 1752 came on the 5th of January, 1753. This would give them two Christmas festivals in the year 1753—January 5th and December 25th. T. P. S.

SOLOMON'S TEMPLE. When Reginald Heber read his prose poem of *Palestine* to Sir Walter Scott, the latter observed that, in the verses on Solomon's Temple, one striking circumstance had escaped him; namely, no tool of iron was used in its erection. Heber retired for a few minutes to the corner of the room, and returned with these beautiful lines:

> "No hammer fell, no ponderous axes rung;
> Like some tall palm, the mystic fabric sprung.
> Majestic silence!"

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Questions and Answers.

THE TWELVE IMAMS—THE MAHDI. (Vol. V, p. 211.) The word *Imâm* literally means "the chief," or "the guide." The word *Mahdi* literally means "he who is led," or "the well-guided one." The fundamental idea of Islamism is the incapability of man to guide himself, or to find the truth, or right path, and that to ignorant man God sends now and then a prophet who is inspired with knowledge and to whom is revealed what ought to be done. God dictates to him and makes him his mouthpiece, and hence he is "the well-guide one"—*the Mahdi par excellence*, who is also to end the drama of the world. Islamism teaches that there have been six prophets — Adam, Noah, Abraham, Moses, Jesus, Mohammed — and that there were to be twelve *imâms*, the last one being Ahmed Mohammed the *Madhi* of 1884. Their names as given in the "The Asian Mystery," by Rev. Samuel Lynde, are as follows :

1. Mohammed, the chosen.
2. Hossum, the elected.
3. Hosein, the martyr.
4. Ali, the ornament,
5. Mohammed, the investigator.
6. Djafar, the just.
7. Moses, the patient.
8. Ali, the accepted.
9. Mohammed, the generous.
10. Ali, the director.
11. Hassan, the Askeree.

and

12. Mohammed, the son of Hassan, the demonstration, the chief, the director, the preacher, the warner, the hoped for, the expected, the lord of the age and time.

Mr Lynde's "Asian Mystery" was published in London, in 1860, which would make the 12th *Mahdi*, or he of 1884, about 28 years of age or under. His first proclamation addressed to the population of Arabia, is found in the *Daily Telegraph*, London, Jan. 29, 1885, as follows :

"Before God and the Prophet, I declare that I did not take up the sword to found a kingdom on earth, or to gather treasures for myself or live in a fine palace ; but to bring consolation and succour to the faithful ; to deliver them from bondage ; and in order that the reign should shine forth once more in its ancient splendor. I am therefore resolved to advance from Khartoum on Dongola, Cairo, and Alexandria, and in each of those cities to hand over the power and government to the Moslems. I shall march from Egypt to the land of the Prophet, to drive out the Turks, who govern no better than the unbelievers, and I shall transfer the country, with it two holy towns, to the sons of Ismael. Be assured, O ye sons of Ismael ! that in a little time I will be with you, sword in hand."

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REPEATING DECIMALS FROM A SERIES. (Vol. V, p. 180.) "A TYRO" asks whether π, or any decimal obtained from a series, could commence to repeat if carried out far enough? This all depends whether the decimal in question happens to be a commensurable quantity. The mere fact of its being calculated from a series does not signify. Thus, $\frac{1}{10}+(\frac{1}{10})^2+(\frac{1}{10})^3+(\frac{1}{10})^4+$etc., *ad infinitum*, is a series that *is* commensurable; its sum can be found like that of other geometrical series. The sum is $\frac{1}{9}$; and $\frac{1}{9}$ is commensurable—that is, it is a fixed, definite amount. It is also a repeater when expressed in decimals, because the denominator contains a prime factor which is neither 2 nor 5. $\frac{1}{2}+(\frac{1}{2})^2+(\frac{1}{2})^3+(\frac{1}{2})^4+$etc., *ad infinitum*, is another series that has a commensurable sum, namely, 1. But when a quantity can be proved to be *incommensurable*, then it cannot be expressed either as a terminating or as a repeating decimal; for all terminating and repeating decimals can be expressed as vulgar fractions; and all vulgar fractions are commensurable. To explain this let us take an *incommensurable* quantity: $\sqrt{2}$ for instance. All square roots of integers, excepting those integers that are square numbers (*e. g.* 1, 4, 9, 16, 25), are incommensurable. For a decimal multiplied by itself must produce a decimal—never an exact integer. Now supposing for the sake of argument it were possible to express $\sqrt{2}$ by a repeating decimal, it would follow that the $\sqrt{2}$ could be expressed as a vulgar fraction. But this would be impossible, for no vulgar fraction multiplied by itself would produce 2. Hence we see that an incommensurable quantity like $\sqrt{2}$, could not be expressed by a repeating decimal. It has been proved that π is also *incommensurable*; consequently, π cannot be expressed as a repeating decimal, or as a vulgar fraction, or in any other commensurable form. We have to be content with an approximation, just as we have to be in regard to square roots.

With respect to constants that have not been *proved* to be incommensurable, the reply is, until they have actually been proved incommensurable, there will always remain a doubt on the point. If incommensurable, the decimal figures will neither terminate nor repeat; if commensurable, on the other hand, they would, if carried out far enough, either begin to repeat, or come to an end.

T. S. BARRETT, New Athenæum Club, London.

Sacrum pingue dabo non macrum sacrificabo.—*Gen.* IV, 4.
Sacrificabo macrum non dabo pingue sacrum.—*Gen.* IV, 3.

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JOB'S HOUSEHOLD. (Vol. V, p. 212.) We are informed that Job's household, was as follows:

Job I, 2-3.		Job XLII, 12-13.	
Sheep,	7,000	Sheep,	14,000
Camels,	3,000	Camels	6,000
Yokes of oxen,	500	Yokes of oxen,	1,000
She asses	500	She asses,	1,000
Sons,	7	"Also," Sons,	7
Daughters,	3	"Also," Daughters,	3

Does the "also," in XLII, 13, give us to understand that his children were doubled, and that he had 14 sons and 6 daughters? X.

Coleridge substantially answers this question in an epigram found among his papers, as follows:

"Sly Beelzebub took all occasions
To try Job's constancy and patience;
He took his honors, took his health,
He took his children, took his wealth;
His camels, horses, asses, cows—
Still the sly devil did not take his spouse.

But Heaven, that brings good out of evil,
And likes to disappoint the Devil,
Had predetermined to restore
Two-fold of all Job had before;
His children, camels, asses, cows—
Short-sighted Devil not to take his spouse."

Another anonymous author puts the same episode into another form:

"The Devil engaged with Job's patience to battle,
Tooth and nail strove to worry him out of his life;
He robbed him of children, slaves, houses, and cattle,
But, mark me, he ne'er thought of taking his wife.

But Heaven at length Job's forbearance rewards;
At length double wealth, double honor arrives;
He doubles his children, slaves, houses, and herds,
But we don't hear a word of a couple of wives."

MEANING OF THE WORD "PISCATAQUOG." (Vol. V, pp. 96, 141.) My attention has been called to the meaning of "Piscataquog," as given in the NOTES AND QUERIES for August, 1888. This name was first applied to a river in New Hampshire, consequently we must look for a signification that would be descriptive of some part of the stream. Piscataqua or Piscataquog (N. H.) is the equivalent of Pachgatqock (Conn.), Piscataway (N.J. and Md.), and probably Pasquotauk (N. C.), signifying "the confluence of two streams," more exactly, "the place where a river branches or divides," at the branch. See Trumbull's "Indian Names in Connecticut."

WM. WALLACE TOOKER, Sag Harbor, N. Y.

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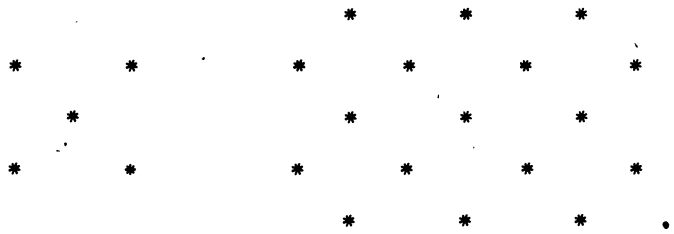
THE QUINCUNX ORDER. (Vol. V, p. 312.) Webster says the word *quincunx* is from *quinque*, five, and *uncia*, ounce. Brande says it is that disposition of five objects in which they are made to occupy the four corners and point of intersection of the diagonals of a square, as:



The word is extended to any number of things so arranged in lines that the members of each succeeding line shall stand behind the spaces of those of the preceding one as shown above.

NUMERAL PALINDROMES. (Vol. II, p. 600.) The thought occurred to me, after reading the palindromes in NOTES AND QUERIES, that such might be found among the natural powers of numbers; and an hour's examination of a table of squares and cubes reveals some singular combinations:

11^2 =	121	11^3 =	1331
22^2	484	101^3	1030301
101^2	10201	111^3	1367631
111^2	12321	1001^3	1003003001
121^2	14641		
264^2	69696	12^2 =	144
836^2	698896	21^2	441
1111^2	1234321	13^2	169
		31^2	961

$111^3 = 1367631$ $\quad 1^2+3^2+6^2+7^2+6^2+3^2+1^2=141$

$1111^2 = 1234321$ $\quad 1^2+2^2+3^2+4^2+3^2+2^2+1^2=44$

HULDAH B. BENSON.

THE TWELVES. (Vol. V, pp. 150-153.) In the scheme of twelves as given in the September number, 1888, the names of the "Twelve Gates," are not given. Where can they be found? JACOB.

The names of the 12 gates of the ancient Jerusalem are given by Vilalpand, in his *Apparatus Urbis et Templi*, tome iii, as follows:

1. Fontis,	4. Anguli,	7. Piscium,	10. Equarum,
2. Stercoris,	5. Ephraim,	8. Benjamin,	11. Aquarum,
3. Vallis,	6. Vetus,	9. Gregis,	12. Fiscalis.

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Revelation of Joseph Hoag of Vermont, in 1803.

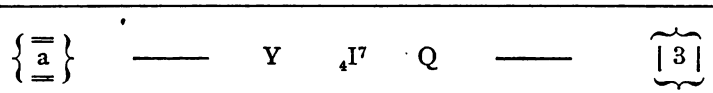
Joseph Hoag of Vermont, an eminent minister of the Society of Friends, published in 1807 the vision he received four years previously while alone in the field. It is considered by many to have been a prediction of the then future course of events, as they were to occur in the history of our country and the final fate of the United States.

The actor in this remarkable scene was a man of high and unblemished character. The old records speak of him as a man of great ability and sterling common sense, and unbiased by superstition. There was no stain to mar the brightness of his record, and he was universally respected by the Society of Friends, and other people.

At midday, while working in the fields of the old Green Mountain State, this worthy man witnessed things as wonderful as John, the Revelator, saw at the Isle of Patmos, and recorded them for the guidance of posterity. We here present the strange and mysterious manuscript to the world, in the indentical words of the original, just as he wrote it. Its style is after the quaint Quaker forms, he using no superfluous phrases :

(*The original manuscript.*)

A Vision From Heaven.



In the year 1803, in the 8th or 9th month, I was one day alone in the field, and observed the sun shown clear, but a mist eclipsed its brightness. As I reflected on the singularity of the event, my mind was struck into silence, the most solemn I ever witnessed, for all my faculties were low and unusually brought into deep silence. I said to myself, "What can this all mean?" I do not recollect ever before to have been sensible of such feelings. I heard a voice from heaven, say:

"This which dims the brightness of the sun, is a sign of present and coming times. I took the forefathers of this country from a land of oppression. I planted them here among the people of the forest. I sustained them, and while they were humble I blessed them and they became a numerous people. But now they have become proud and lifted up, they have forgotten me, who nourished and protected them

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in the wilderness, are running into every abominiable and evil propensity of which the old countries are guilty, and have taken quietude from the land and suffered a dividing spirit to come among them. Lift up thine eyes and behold."

I saw them dividing in great heat. This division began in the churches. It commenced in the Presbyterian Society and went through the various religious denominations, in its progress and closed. Those that dissented went off with high heads and taunting language, and those who kept in their original sentiments appeared exercised and sorrowful; and when the dividing spirit entered the Society of Friends it raged in as high degree as in any I had before discovered. As before, those who kept to their ancient principles retired by themselves. It appeared in lodges of Freemasons, where it broke out in appearance like a volcano, inasmuch as it set the country in an uproar for a length of time. Then it entered politics in the United States, and did not stop until it produced a civil war, and abundance of human blood was shed in the course of the combat; the Southern States lost their power, and slavery was annihilated from their borders. Then a monarchal power arose and took the government of the United States, established a national religion, and made all the people tributary to support its expenses. I saw them take property from Friends to a large amount. I was amazed at beholding all this; when I heard a voice proclaim:

"This power shall not always stand, but with it I shall chastise my church until they return to the faithfulness of their forefathers. Thou seest what is coming on thy native land for all its iniquities, and the blood of Africans, the remembrance of which has come up before me. This vision is yet for many days."

I had no idea of writing it for many years, until it became such a burden, that for my own relief I have written it.

Burlington, Vt., 1807, 4 mo., 17 day. JOSEPH HOAG.

The above also appeared in the Philadelphia *News* many years ago, and has been printed as a broadside occasionally for distribution to such as are interested in prophetic literature. While the greater portion of it has been literally fulfilled, it now remains to be seen whether the United states is to become a monarchal power, and a national religion to prevail.

Joseph Hoag was born in 1762, and died in 1846, in his 85th year. He would have gone to the stake for his principles, from which no Elias Hicks, Joseph John Gurney, nor others could turn him. His life and teachings are published in an octavo volume of 389 pages, "A Memoir of the Life of Joseph Hoag, an Eminent Minister of the Gospel in the Society of Friends." His motto is found in Revelation XIV, 13. Auburn, 1861.

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REMARKABLE COINCIDENCES. (Vol. V, p. 312.) Some of the remarkable coincidences that have been taken note of may be mentioned as follows:

Edo Neuhauis says it is a fact which historians have averted to that great importance attaches to some names. For instance, the name and *ordinal* assumed by many of the Popes on their accession to the chair of Peter, has in many cases been an omen or prognostic of the number of years during which their life and dignity were destined to last.

	Raised.	Died.		Raised.	Died.
Alexander II,	1061	1063	Leo X,	1513	1523
Clement III,	1187	1190	Gregory XIII,	1572	1585
Victor IV,	1138	1142	Sxetus V,	1585	1590
Pius V,	1566	1571			

By a similar fate, Benedict II, Sextus II, Anastasius II, Joannes II, Martinus II, Nicolaus II, each died in the second year of the imperial dignity of the individual who at the time occupied the throne of the Cæsars.

So, also, Stephen III, Martinus III, Clemens III, Nicolaus III; Felix IV, Martinus IV, Nicolaus IV, Paul IV, Benedict IV, Clement IV; Boniface V; Innocent VIII, each died in the year succeeding, as indicated by the ordinals, while in possession of sovereign authority as emperors of Germany.

These deaths occurred as coincidences, according to the general acceptation of the word; while some believe them to be ominous.

Louis Philippe ascended the throne, . .	1830	
The date of his birth was 1773, added 1+7+7+3	18	= 1848
The birth of the queen was 1782, added the same,	18	= 1848
Their marriage was in 1809, added the same,	18	= 1848
Louis Phillipe abdicated the throne, . . .		1848
Louis Napoleon was proclaimed emperor, .	1852	
The date of his birth was 1808, added 1+8+0+8	17	= 1869
The birth of the empress was 1826, added the same,	17	= 1869
Their marriage was in 1853, added the same,	17	= 1869

William Shakespeare, born April 23, 1564; died April 23, 1616; age, 52 years.

John Adams, second president, and Thomas Jefferson, third president of the United States, both died July 4, 1826, aged 91 years and 83 years respectively.

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PROBLEMS.

1. The recently published work, "The Secret Doctrine," by H. P. Blavatsky, Vol. I, p. XLVI of the introduction, says there still exists, somewhere in the archives of the French Academy, the famous law of probabilities worked out by an algebraical process for the benefit of sceptics by certain mathematicians. It is as follows:

"If two persons give their evidence to a fact, and thus impart to it each of them $\frac{5}{6}$ of certitude, that fact will have then $\frac{35}{36}$ of certitude; *i. e.* its probability will bear to its improbability the ratio of 35 to 1. If three such evidences are joined together the certitude will become $\frac{215}{216}$. The agreement of ten persons giving each $\frac{1}{2}$ of certitude will produce $\frac{1023}{1024}$, etc., etc."

Are these statements correct? PHILOMATH.

2. A sportsman was asked how many birds he had taken, and replied:

If 5 be added to $\frac{1}{3}$ of those I took last year, it will make $\frac{1}{2}$ of the number I have taken this year; but if from 3 times this last half 5 be taken, you will have the number taken last year.

How many did he take each year? JONAS.

3. In an old mathematical work is found the following problem:

How far did the lost spirits fall in 9 days, as stated in Milton's "Paradise Lost," Book VI, line 861 "Nine days they fell"; and Book, IX, lines 62-69:

> "Thence, full of anguish driven,
> The space of seven continued nights he rode
> With darkness, thrice the equinoctial line
> He circled, four times crossed the car of night
> From pole to pole, traversing each colure;
> On the eighth returned, and on the coast, averse,
> From entrance or cherubic watch, by stealth
> Found unsuspected sway."

JONAS.

4. The following problem has been proposed, but the answer has not been forthcoming:

Suppose a body move eternally in the following manner: 20 miles the first minute, 19 miles the second minute, $19\frac{1}{2}$ miles the third, and so on in geometrical progression. What is the utmost distance it can reach? L. O. K.

5. A company of men and women expend at a feast 1000 francs. The men pay each 19 francs, and the women 11 francs. How many men and how many women are there? L. O. K.

6. A man desires to reach home exactly at 12 o'clock noon. If he travels 10 miles an hour, he arrive home 2 hours too soon; but if he travels 6 miles an hour, he arrives home 2 hours to late. How far is he from home? C. C.

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QUESTIONS.

—o——o—

1. (*a*) What is the form of the geometrical figure called a *gnomon* ?
(*b*) What is an *escribed* circle ?
(*c*) Why do we say *long* and *short* ton for *greater* and *lesser* ton ?
(*d*) In what book is the word *millions* first found, and where?
(*e*) Why is the Greek letter ε (epsilon) used to designate the Naperian base (2.81828182 8+) ?
(*f*) What is *duodenal* arithmetic, and where can a treatise on it be procured ?
(*g*) Where in James Ryan's *Algebra* is the pupil instructed to "complete the square" in solving equations ?
(*h*) Why is the fifth power ($2^5=32$) called a *sursolid* ?
(*i*) Has Robert Flower's work entitled *The Superdigit*, a manuscript owned by J. O. Hallowell, ever been published.?

ELMWOOD ACADEMY.

2. (*a*) Why do the Anglo-Israel people call the United States of America, *Manasseh*, the half-tribe of Joseph, and are we to infer that we are, therefore, descendants of Joseph and Asenath (Gen XLI, 51).
(*b*) What is the title of the book by Rev. Jesse H. Jones, said to have been written to prove that the United States of America is "the kingdom of heaven" already come ?
(*c*) What professor has recently published a work proving that the lost Paradise is situated at the North Pole.
(*d*) Can any reader tell me of any good work giving the theory, prophecy, plans, etc., of the return of the Jews to Jerusalem ?

ISAAC T. POLKHORN.

3. Is the the correct meaning of the word *California*, as the Latin roots indicate, *cali fornica*, "a hot furnace" ? C. H. M.

4. Where can be found among the ancient historians the account of the fabulous story of the *phœnix* ? WELLINGTON HOWARD.

5. A quotation from Washington Irving says of one of the Dutch governors of New York, that "he was exactly five feet six inches in height, and six feet five inches in circumference; his head was a perfect sphere, and of stupenduous dimensions.,' What governor was this, and when did he govern ? AQUILLA Q. FORD.

6. Where in Massachusetts is the *Potanumaqunt* Harbor, mentioned in connection with the loss of the Sparrow-Hawk wrecked in 1626 ? AUGUSTUS.

7. Where can a catalogue of the names of the F. F. V's. (First Families of Virginia) be found ? V.

8. Is the name *Phillipi* the plural of Phillipus ? Who were the Phillipides ? Why do the Spanish spell Philip *Felipe* ? V.

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

"Stand out from between me and the Sun." — DIOGENES.

VOL. VI. FEBRUARY, 1889. No. 2.

ERRONEOUS SPELLING. S. S. Haldeman, in his work on "Penn Dutch," took from the file of a native druggist the names of certain drugs called for, viz. :

Allaways, Barrickgorrick, Sider in de ment, Essig of Iseck, Hirum Packer, Cinment, Cienwepper, Sension, Saint Cum, Opien, High Cyrap, Senoand mano misct, Sking, Coroces Suplement, Red puesepeite, Ammelime, Lockwouth, Absom's salts, Mick nisey, Corgel, Chebubs, By crematarter potash, Balderzon, Tower beans, Cots Shyned.

These properly written are as follows :

Aloes, Paregoric, Citrine ointment, Acetic acid, Hicru Picra, Cinnamon, Guiana pepper, Gentian, Cinchona, Opium, Hive Syrup, Senna and Manna mixed, Sulphate of Zinc, Corrosive Sublimate, Red Precipitate, Aniline, Logwood, Epsom Salts, Magnesia, Cordial, Cubebs, Bichromate of Potash, Valriean (G. Balprian), Laurel Berries, Cochineal.

Haldeman also gives some examples of misdirected letters :

Bintgrof, Scur E. Quss, Nu Yourck Sevaber, Gandoge, Schickets Laenghaester Caunte, Burgix Caunte.

These properly spelled are :

Pinegrove, Syracuse, New York, Safe Harbor, Kentucky, Chiquis, Lancaster county, Berks county.

Druggists and postmasters who understand the dialect however, can read these examples with a good deal of ease. Many other lists could be given which are not only curious but instructive.

I. B., M. D., Oakville, Penn.

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Coins and Medals.

Some amusing examples of the manner in which coins and medals have been employed, in which they serve as curious mirrors of public feeling, and as permanent records of transitory passion. There is a medal, coined in the time of Joseph of Austria, bearing this inscription:

Josephus Imperator regnat amore et timore, facit MDCCV.

(The Emperor Josephus reigns by love and fear, which make MDCCV.)

On the reverse is a curious cabbalistic interpretation, thus given:

CABBALÆ CLAVIS.

A 1	G 7	N 40	T 100
B 2	H 8	O 50	V 200
C 3	I 9	P 60	W 300
D 4	K 10	Q 70	X 400
E 5	L 20	R 80	Y 500
F 6	M 30	S 90	Z 600

The exergue, or small space beneath the base line of the "cabbalæ clavis," contains this:

"*Sit ineffabilis, sit innumerabilis Austriæ gloria.*"

(Ineffable and innumerable be Austria's glory.)

		I	9								
I	9	M	30			A	1				
O	50	P	60			M	30				
S	90	E	5	R	80	O	50				
E	5	R	80	E	5	R	80	T	100		
P	60	A	1	G	7	E	5	I	9		
H	8	T	100	N	40			M	30		
U	200	O	50	A	1	E	5	O	50		
S	90	R	80	T	100	T	100	R	80		
								E	5		
	512		415		233		271				274
											271
											233
											415
											512
							Total,				1705

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The date of the reform of the calendar in 1700, is curiously and variously recorded in many medals of the time. Here are some specimens which give the dates in Roman numerals :

(1) *GereChtes Lobopfer Denk Mahl.* MDCLL.
(The record of merited gratitude.)

(2) *GeenDarten CaLenDers DenkzahL.* DDDCLL.
(In remembrance of the reformation of the calendar.)

(3) *Hoert doch, wunder ! In Jahr* MDCC. *wusten de leuthe nicht wie alt sie waren.*
(Listen to a wonder ! In the year 1700 people did not know how old they were.)

One medal portrays a boy asking an old man his age ; and the answer is *Nescio* (I know not). Other medals have these :

(1) *Wo sind wir ?*
(Where are we ?)

(2) *Ey was wunder !*
MDCC. sind de noch nicht herunter
Wers nicht glaubet lieber herr
Bleibt ein 99-er.

What a wonder !
MDCC. has not knock'd under !
Who won't believe it, my dear sir,
Is a 99-er. (Is a ninety and niner.)

There is a medal struck at Ostend, one side of which exhibits a map of the neighborhood of Helvoetsluys, and the other a battle between the Spaniards and the Flemings at the taking of Ostends, with this inscription in Greek :

CHRYSEA CHALKEION.
(Gold and copper.)

Here is this chronogram in Latin :

Itane fLanDrIaM LIberas Iber. MDLLIIII.
(Is it thus, Spaniard ! thou freest Flanders ?

Another medal has the following to celebrate the Peace of 1678.

a DoMIno VenIens popVLIs paX Læta refVLget. MDLLLXVIIIII.
(Peace, which is the gift of heaven, brings gladness to the people.)

There is a medal of William III containing the names of all the British sovereigns, with the date of their succession to the throne, and

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that of their deaths, from Egbert A. D. 801, with this inscription in Dutch :

" These comb to the terone
With septer and crown
But none were more glorious,
And none more victorious,
That ever we heard,
Than William the Third."

At the rupture of the treaty of Ryswyck this appeared on medals :

Auwey ! der fried hat shon en loch 1702.
(Alas ! there is always a hole in the peace.)

On the reverse :

Auwey ! auwey ! auwey ! auwey !
Ryswykscher Fried is gar entzwei.
(O woe ! O woe ! O woe ! O woe !
The Ryswyk peace is torn in two.)

ELIOT'S INDIAN BIBLE. A description of this quaint bibliograph has been published in a Boston paper. It is in the Nipmuck language, and some of the words would try the skill of a compositor, who generally professes to be able to decipher and spell anything in any known or unknown tongue. We will give a short resumé of this specimen of Indian*ana* with some extracts from the book :

The ancient book is in quarto form, rough and rusty with old age, and hallowed by old associations. The language in which it is written is dead, entirely dead ; no man living can either read it or speak it. The book was printed in 1635. The quality of the paper is poor enough, and the type is uneven and unsightly. The title-page seems to have been cut with a pen-knife for the occasion. It is bound in sheep, with heavy ribs on the back. The illuminations at the beginning are extremely rude, and the lines are bent and broken.

The longest word found in this Bible is in Mark 1, 40 :

" WUTTEPPESITTUKQGSSUNNOOWEHTUNKRUOH" (*Kneeling down to him*).

In translating Judges v, 28, " The mother of Sisera looked out at a window and cried through the lattice," he asked the Indians for the word " lattice," and found, when his translation was completed, that he had written, " and *cried through the eel-pot*," that being the only object which the natives knew as corresponding with the object Mr. Eliot described to them.

The Psalms are translated into that form of verse which is termed in our hymn-books " common metre," and nothing can be more clumsy and uncouth than the structure of the rhymes. Sternhold and Hopkins even may be read with exquisite pleasure after perusing a few

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stanzas like the following, which are from the 19th Psalm, "The Heavens declare the glory of God," etc.

1. "Kesuk kukootomuhteaumoo
God wussohsumoonk
Mamahchekesuk wunnahtuhkon
Wutanakausnonk

2. Hohsekoeu kesukodtash
Kuttoo waantamonk
Kah hohsekoe nukonash
Keketookon wahteauonk"

The first edition of this Bible was published in 1663. The type was set by an Indian, and it was three years in going through the press. It is the first edition of the Bible ever published in America.

MONARCHS AND PRESIDENTS OF THE PRINCIPAL COUNTRIES OF THE WORLD. The following table is appropriate for reference:

	Age.	Accession.
William III, of Netherlands,	71	1849
Christian IX, of Denmark,	70	1863
Victoria, of England,	69	1837
Peter II, of Brazil,	63	1831
Nasser ed Deen, of Persia,	60	1848
Francis Joseph, of Austria,	59	1848
Oscar II, of Sweden,	59	1872
Frederick III, of Germany,	56	1888
David Kalakaua, of Hawaii,	53	1874
Grover Cleveland, President of the United States,	51	1885
Sadi-Carnot, President of France,	49	1887
Alexander III, of Russia,	44	1881
Humbert, of Italy,	44	1878
Mutsuhito, of Japan,	39	1867
Kuang Su, of China,	17	1875
Alphonso XIII, of Spain,	2	1886

"THE SUM OF TWO NUMBERS IS EQUAL TO THEIR PRODUCT." (Vol. V, p. 206.) While there are no other *whole* numbers than 2 and 2, there are an infinite number of "answers."

$$x + y = xy, \quad \text{transpose}$$
$$xy - x = y, \text{ or } (y - 1)x = y$$
$$x = \frac{y}{y-1} \text{ in which } y \text{ may be } \textit{any} \text{ number; so that if}$$
$$y = 2,\ 3,\ 4,\ 5,\ 6,\ 7, \text{ \&c.,}$$
$$x = 2,\ \tfrac{3}{2},\ \tfrac{4}{3},\ \tfrac{5}{4},\ \tfrac{6}{5},\ \tfrac{7}{6}, \text{ \&c.}$$

In words, *any* number may be one of them and *that number* divided by *one less* will be the other. J. H. D.

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QUESTIONS AND ANSWERS.

PATERNOSTER ROW. (Vol. V, p. 163.) "Paternoster Row" was so named from the rosary, or pater-noster makers. We read of "one Robert Nickle, a pater-noster maker, and citizen, in the reign of Henry IV." While other accounts say it is so named because funeral processions, on their way to St. Paul's, began their pater-noster at the beginning of the Row, and went on repeating it till they reached the church-yard gate. R., Philadelphia, Penn.

THE ISMAELITES. From whom do the Mohammedans claim descendancy, and why called *Ismaelites?* INQUIRER II.

According to Washington Irving, in his "Life of Mahomet," the Mohammedans are *Ismaelites* and claim to be descendants from *Ishmael*, the son of Abram by Hagar (Gen. XVI, 15), and thatthe *twelve princes* (or dukes) of Ishmael were:

1. Nebajoth,	4. Mibsam,	7. Massa,	10. Jetur,
2. Kedar,	5. Mishma,	8. Hader,	11. Naphish,
3. Abdeel,	6. Dumah,	9. Tema,	12. Kedemah.

These tribes "dwelt from Havliah unto Shur, that *is* before Egypt, as thou goest toward Assyria." This country is said to have been Arabia.

TWELVE ILLUSTRIOUS KNIGHTS. Who are the "Twelve Illustrious Knights," which are said to have been Solomon's favorites in the building of his temple? J. P. SHIELDS.

Jeremy L. Cross, in his "Templar's Chart," pp. 20-21, says Solomon appointed Twelve Masters, one from each tribe, and gave them command. They gave an account to Solomon every day, of the work that was done in the temple, by their respective tribes, and received their pay. Cross gives their names as follows:

1. Joabert was over	Judah	7. Kerim was over	Dan,
2. Stockin	Benjamin.	8. Berthemar	Asher,
3. Terry	Simeon,	9. Tito	Naphtali,
4. Morphey	Ephraim,	10. Terbal	Reuben,
5. Alycuber	Manasseh,	11. Benachard	Issachar,
6. Dorson	Zebulon,	12. Taber	Gad.

There is much traditional history associated with these names in their masonic connection with Solomon's Temple.

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COMPLETING THE SQUARE. (Vol. VI, p. 236.) In James Ryan's "Elementary Treatise on Algebra" (6th edition, N. Y., 1851, p. 246), he says:

"It is proper to take notice here of the following method of resolving quadratic equations, the principle of which is given in the *Bija Ganita*, thus: If a quadratic equation be of the form $4a^2x^2 \pm 4abx = \pm 4ac$, it is evident that, by adding b^2 to both sides, the left-hand member will be a complete square, since it is the square of $2ax + b$; and, therefore, by extracting the square root of both sides, there will arise a simple equation, from which the the value of x, may be determined."

Horatio N. Robinson, in his "Universal Key to the Science of Algebra" (Cincinnati, 1844, p. 74), has this query, after a solution of an example by James Ryan, in which solution Ryan uses the phrase "completing the square;" Robinson asks: "*How did he complete the square?* We find no directions in his book that would enable us to do so." Now the question arises, is there any instructions how to "complete the square" in any edition of Ryan's "Algebra," prior to 1844, the year of the publication of Robinson's "Key?"

THE DUTCH GOVERNOR OF NEW YORK. (Vol. VI, p. 236.) That Dutch governor inquired for, who was "exactly five feet six inches in height, and six feet five inches in circumference," was the renowned Wouter (or Walter) Van Twiller. This surname Twiller is said to be a corruption of the original *Twijfler* (pronounced *Tweefler*) which in English means "Doubter." This name was remarkably characteristic of his habits. He scarcely ever spoke except in monosyllables, and he never made up his mind on any doubtful point. He was a very wise Dutchman, never said a foolish thing, never was known to laugh; there was never a matter proposed to him but what he put on a mysterious look, shook his spherical head, smoked for five minutes, and then sagely observed, "I have my doubts about the matter." He did not care whether the sun revolved around him, or he around the sun. He governed New York 1633. A. L. C.

PARADISE FOUND. (Vol. VI, p. 236.) The book inquired for is probably "Paradise Found; the Cradle of the Human Race at the North Pole; a Study of the Prehistoric World." By Wm. F. Warren. Duodecimo, pp. 505. L. HUMBERTSON, Boston, Mass.

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F. F. V's (First Families of Virginia.). (Vol. VI, p. 236.) William H. Whitmore in an essay on "The Origin of the Founders of the Thirteen Colonies," 1864, says it is most erroneously supposed that the names of certain families are a proof of their gentle origin; that the idea is wholly unfounded; that the gentry of England consist of certain families, whose ancestors held a certain rank. Unless the line of descent can be regularly proved, identity of names signify nothing. This argument is based upon a certain arbitrary nomenclature. A Courtenay, a Howard, a De Vere, is not a gentleman in the sense the heralds use the term, unless he can trace his pedigree. Yet even here, the Virginians have no exclusive claim. The following list is given by Bishop Meade, as comprising the chief families of the Virginia gentry:

"Names of some of the old and leading families in Eastern Virginia, in colonial times and immediately succeeding the Revolution:

Acril, Alexander, Allen, Ambler, Archer, Armistead, Atkinson, Aylett.

Bacon, Baker, Baldwin, Ball, Ballard, Banister, Bankhead, Baskerville, Bassett, Baylor, Baynham, Berkeley, Beverly, Birchett, Blair, Bland, Blow, Bolling, Booker, Booth, Bouldin, Bowdoin, Bowyer, Bradley, Branch, Braxton, Brent, Broadnaxe, Brooke, Browne, Buckner, Burley, Burwell, Butler, Byrd.

Cabell, Calloway, Carr, Carrington, Carter, Cary, Catlett, Chamberlayne, Christian, Claiborne, Clarke, Clayton, Cocke, Coleman, Coles, Colston, Conway, Cooper, Corbin, Crawford, Custis.

Dabney, Dandridge, Daniel, Davenport, Davis, Digges, Dulany.

Edmunds, Edwards, Eggleston, Eldridge, Ellis, Embry, Eppes. Everard, Eyre.

Fairfax, Farley, Faulcon, Field, Fitzgerald, Fitzhugh, Fleming, Fry,

Gay, Gaines, Garland, Garnet, Gholson, Gibbon, Gilmer, Goode, Goodwin, Grammat, Graves, Grayson, Green, Greenway, Griffin, Grymes.

Hackley, Hairston, Hansford, Hardaway, Harmer, Harrison, Harvie, Hawkins, Haynes, Henderson, Heath, Herbert, Heth, Hicks, Hodges, Holliday, Holmes, Hooe, Hopkins, Howard, Hubard.

Innes, Irby.

Jefferson, Jennings, Johnson, Jones, Joynes.

Kennon, King.

Lanier, Lee, Leftwich, Lewis, Lightfoot, Littlepage, Littleton, Lomax, Ludwell, Lyons.

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Mallory, Marshall, Martin, Marye, Mason, Massie, Matthews, Mayo, McCarty, Meade, Mercer, Meredith, Meriwether, Michie, Minge, Moore, Mosby, Moseley, Morris, Morton, Munford.

Nash, Nelson, Newton, Nichols, Nivison, Noland, Norvell.

Page, Parke, Parker, Peachey, Pegram, Pendleton, Penn, Peter, Peyton, Phillips, Pierce, Pleasant, Pollard, Pope, Posey, Powell, Poythress, Prentice, Price, Prosser.

Randolph, Reade, Riddick, Roane, Robinson, Rose, Royall, Ruffin, Russell.

Savage, Saunders, Scarburgh, Selden, Shepherd, Short, Skelton, Skepwith, Slaughter, Spencer, Spottswood, Stanard, Steptoe, Stevenson, Stith, Stokes, Strother, Swann, Syme.

Tabb, Talbot, Taliafero, Tayloe, Taylor, Tazewell, Terry, Thornton, Todd, Travis, Trent, Tucker, Tyler.

Upshaw, Upshur.

Vaughn, Venable.

Wane, Waller, Walker, Walton, Warde, Waryng, Washington, Watkins, Watson, Webb, West, Westwood, Whiting, Wilcox, Wilkins, Williams, Willis, Winston, Wise, Withers, Wood, Woodson, Wormley, Wyatt, Wythe.

Yates, Yelverton.

Most of the names in this catalogue are also found in Savage's 'Dictionary of the Settlers of New England.' Two-thirds of them are to be found in both places. The proof is as ample in one case as the other. If the Virginians were gentlemen on account of their names, so were the Yankees."—*Meade*, Vol. II, p. 428.

THE KNIGHT'S TOUR—QUOTATION FROM SHAKESPEARE. (Vol. VI, p. 222.) After getting a start, and making sure I was right, I have succeeded in following the knight over the chess-board and find that his 64 footsteps make the quotation found in *King John* Act IV, Sc. II, lines 11-16 :

> "To gild refined gold, to paint the lily,
> To throw a perfume on the violet,
> To smooth the ice, or add another hue
> Unto the rainbow, or with taper-light
> To seek the beauteous eye of heaven to garnish,
> Is wasteful, and ridiculous excess." G. S. C.

"MILLIONS"—WHERE FIRST FOUND? (Vol. VI, p. 236.) The first and only place found in the Bible is Genesis XXIV, 60 :

The King James version reads "Be thou *the mother* of thousands of millions."

The Septuaginta reads "*chiliádas mysiádon.*"

The Douay version reads "thousands of thousands."

The Julia A. Smith version reads "thousands of ten thousands."

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THE PHŒNIX. (Vol. VI, p. 221.) The story of the long life of the bird called the Phœnix is found in the apocryphal epistle of Clement to the Corinthians, and there given as a proof of the resurrection. We give the translation as found in the "Anti-Nicene Christian Library—The Apostolic Fathers," Vol. I, p, 25, First Epistle to the Corinthians XXV :

"Let us consider that wonderful sign [of the resurrection] which takes place in eastern lands, that is, in Arabia and the countries round about. There is a certain bird which is called a phœnix. This is the only one of its kind, and lives five hundred years. And when the time of its dissolution draws near that it must die, it builds itself a nest of frankincense, and myrrh, and other spices, into which, when the time is fulfiled, it enters and dies. But as the flesh decays a certain kind of worm is produced, which, being nourished by the juices of the dead bird, brings forth feathers. Then, when it has acquired strength, it takes up that nest in which are the bones of its parent, and bearing these it passes from the land of Arabia into Egypt, to the city called Heliopolis. And, in open day, flying in the sight of all men, it places them on the altar of the sun, and having done so, hastens back to its former abode. The priests then inspect the registers of the dates, and find that it has returned exactly as the five hundredth year was completed."

The story of the Phœnix is also given by Herodotus, in his second book entitled *Euterpe*, Sec. LXIII, in little different language as translated, and for comparison we will quote it here :

"They [the Egyptians] have also another sacred bird, which, except in a picture, I have never seen ; it is called the phœnix. It is very uncommon even among themselves ; for according to the Heliopolitans, it comes there once in the course of five hundred years, and then only at the decease of the parent bird. If it bear any resemblance to its picture, the wings are partly of a gold and partly of a ruby color, and its form and size perfectly like the eagle. They relate one thing of it that surpasses all credibility ; they say that it comes from Arabia to the Temple of the Sun, bearing the dead body of its parent inclosed in myrrh, which it buries. It makes a ball of myrrh shaped like an egg, as large as it is able to carry, which it proves by experiment. This done, it excavates the mass, into which it introduces the body of the dead bird ; it again closes the aperture with myrrh, and the whole becomes the same weight as when composed entirely of myrrh ; it then proceeds to Egypt to the Temple of the Sun."

Ovid relates substantially the same story in *Metamorphoses* XV, 392, and represents Pythagoras as adducing the story of the phœnix by way of exemplifying the perpetual reproduction of the world ; and

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in point of application there is reason to believe that the mythos originated from this very doctrine. The *Phœnicians* gave the name phœnix to the palm-tree, because when burnt down to the ground it springs up again fairer and stronger than ever. Phœnix is said to have been the grandson of Saturn, and Sir W. Drummond, author of *Œdipus Judiacus*, thinks the word is derived from *Enoch*, or rather from *Phenach* with the old Egyptian definite article *Pi* prefixed. Montfauçon says the phœnix is represented on a medal of Constantine the Younger, on top of a rock, all radiant, with the inscription, *Felix temporum reparatio*, "the happy restoration of the times," which is agreeable to the opinion of the ancients that the phœnix renewed itself.

In many modern works the phœnix is quoted to live "*six* hundred years," but the ancient record gives it as "five yundred years."

"THE KINGDOM OF HEAVEN—WHAT IS IT? WHERE IS IT?" (Vol. VI, p. 236.) Undoubtedly this contributor refers to Rev. Jesse H. Jones's book with the above heading, which was published in 1871, duodecimo, 362 pages. "Dedicated to the children of the Pilgrims and Puritans, that people whom God has blessed with the richest inheritance, and laden with the heaviest responsibilites ever allotted to a race of men, is this slight contribution to the celebration of the Jubilee Year." The 215th page of the book is bordered, and the following displayed as a full page :

THE UNITED STATES OF AMERICA IS THE KINGDOM OF HEAVEN WHICH JESUS CHRIST CAME TO ESTABLISH UPON THE EARTH.

The summary of the future movement is that political equality will be granted to women ; the abolition of the liquor traffic and the obliteration of the drinking custom ; the labor question is to be settled by the principles and practices of the Pentacostal church ; the Jews will accept Jesus as their Messiah ; the United States will obtain the independence of Palestine ; the Jews will gather and return there in myriads, never again to be dispersed ; the Gentiles will be servants to the Jews ; Jesus Christ will descend from heaven and establish his throne on Mount Moriah on the spot where the ark of the covenant sat ; He will reign as universal King, and thus will "the tabernacle of God be with men" ; and on this earth He is to be exalted to the throne of Universal Dominion, and to be entitled

"KING OF KINGS AND LORD OF LORDS."

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Folk-Lore.

—o—o—

THE HOUSE THAT JACK BUILT. (Vol. IV, p. 243.) The Hebrew version of this nursery folk-lore has already been given. There is another quaint parable in the same view, called the "Cornish Christmas Carol," as follows :

1. First voice, Come and I will sing you !
Second voice, What will you sing me ?
First voice, I will sing One—O ;
Second voice, What is your One—O ?
First voice, One of them is God alone,
And He ever shall remain so.

2. (First two lines as above.)
First voice, I will sing you Two—O !
Second voice, What is your Two—O ?
First voice, Two of them are lily-white babes.
All clothed in green—O.
Chorus, One of them is God alone,
And He ever shall remain so.

3. (Four lines as before, after waiting quesiion and answer, and changing to Three—O)
First voice, Three of them are strangers,
Chorus, Two of them are lily-white babes,
All clothed in green—O.
One of them is God alone,
And He ever shall remain so.

4. (As before, changing to Four—O.)
First voice, Four are the gospel preachers,
Chorus, Three of them are strangers,
Two of them are lily-white babes.

5. (As before, changing to Five—O.)
First voice, Five is the ferryman in the boat,
Chorus, Four are the gospel preachers,
(Three as before, to the end.)

6. (As before, changing to Six—O.)
First voice, Six are the cheerful waiters,
Chorus, (Five as before, and continue.)

7. (As before, changing to Seven—O.)
First voice, Seven are seven stars in the sky,
Chorus, (Six as before, and continue.)

8, (As before, changing to Eight—O.)
First voice, Eight is the great archangel,
Chorus, (Seven as above, and continue.)

9. (As before, changing to Nine—O.)
First voice, Nine is the moonshine, bright and clear,
Cuorns, (Eight as before. and continue.)

10. (As before, changing to Ten—O.)
First voice, Ten are the Ten Commandments,
Chorus, (Nine as before, and continue.)

11. (As before, changing to Eleven—O.)
First voice, Eleven of them have gone to heaven.)
Chorus, (Ten as before, and continue.)

12. (As before, changing to Twelve—O.)
First voice, Twelve are the Twelve Apostles,
Chorus, (Eleven as before, and continue.

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This quaint old carol was set from the singing of three children in Essex, N. Y., who, during a residence on the southern shore of Lake Superior, caught it by ear from the Comishwen engaged in the copper mines of that region. There is something strikingly beautiful in the constant recognition of the Deity of Christ, as well as in the skill with which the incarnation and birth of our Lord are made the central point and history, as well as of the universe. But the allusions are something not self-evident.

The "two lily-white babes" are our Lord and St. John the Baptist; and they are "clothed in green" as a type of their growth — the one to be the greatest of those who had preceded Christ, and the other to be the "stone cut out without hands," which should fill the whole world.

The "three strangers" are the magi, or the three kings of the Orient."

The "gospel preachers" are the four evangelists.

The number "five" is the number of the books of Moses, and the "ferrymen in the boat" represents the Law in the ship of the Mosaic church, as the "schoolmaster" bringing us to Christ.

The "six cheerful waiters" are Zachariah and Elizabeth, Joseph and Mary, Simeon and Anna, who waited for the consolation of Israel. (Luke II, 25.)

The "seven stars" are meant to include our whole solar system— perhaps they stand for the whole stary firmanent.

The "eight," the peculiar dominical number, is given to the "great archangel" who announced the birth of Christ.

There is no reason that I know for giving "nine" to the "moonshine," unless there was no other number of the series left vacant.

The "Ten Commandments" are not a duplication of the mention of the Law, but refer to Christ alone who perfectly kept them all.

The "eleven" recognizes the presence of the apostles in "heaven," where they still pray for the Church, while Judas "went to his own place."

The "Twelve Apostles" nevertheless crown the end with the full number, as completed in the foundations of the New Jerusalem.

REV. J. H. HOPKINS.

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FLEMISH FOLK-LORE. Attention is called to the study of animal lifetime which has called forth this formula from Flemish folk-lore,—a "town" or enclosure being supposed to last three years :

A town lives three years,
A dog lives three towns,
A horse lives three dogs,
A man lives three horses,
An ass lives three men,
A wild goose lives three asses,
A crow lives three wild geese,
A stag lives three crows,
A raven lives three stags,
And the phœnix lives three ravens.

VERMONT FOLK-LORE. In Windsor county, Vt., when children are at play, and are about to jump off a fence, rock, or an elevated place, they often repeat the following :

One to make ready,
Two to prepare,
Three to go slender,
Four to go there.

In Rutland county, the children repeat the following :

One for a penny,
Two for a show,
Three to make ready,
And four for to go.

J. M. CURRIER.

In Hillsborough county, N. H., forty years ago, children arising, after eating hasty pudding and milk, repeated the following :

First the best, second the same,
Third the bird, and fourth the game,
Fifth the lubber, and sixth the same.

WEATHER FOLK-LORE. More than thirty years ago, the New England almanacs contained the following :

An evening red and a morning gray,
Will set the traveler on his way;
But an evening gray and a morning red,
Will pour down rain on a pilgrim's head.

A rainbow in the morning,
Is the shepherd's warning;
A rainbow at night,
Is the shepherd's delight.

If Candlemas day be fair and bright,
Winter will have another flight;
But if Candlemas day be cloudy, and rain,
Winter has gone not to come again.

When Christmas is white,
The graveyard is lean;
But fat is the graveyard,
When Christmas is green.

If the cock goes crowing to bed,
He'll certainly rise with a watery head.

If the moon shows like a silver shield,
Be not afraid to reap your field.

When you see a gossamer flying,
Be sure the air is drying.

When the peacock loudly bawls,
Soon we'll have both rain and squalls.

When black snails cross your path,
Black clouds much moisture hath.

February 2 is Candlemas day,
Half the corn and half the hay.

Wind from the east is bad for man and beast;
Wind from the south is too hot for them both;
Wind from the north is of very little worth;
Wind from the west is the softest and best.

when the ass begins to bray.
We surely shall have rain today.
When the donkey blows his horn,
'Tis time to house your hay and corn.

Rain before seven, fine before eleven.

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PROBLEMS.

—o—o—o—

Colebrooke's "Hindoo Algebra" gives some amusing examples that are appropriate here:

1. "Pretry girl, with tremulous eyes, if thou knowest the correct method of inversion, tell me what is the number, which multiplied by 3, and added to $\frac{3}{4}$ of the product, and divided by 7, and reduced by subtraction of $\frac{1}{3}$ part of the quotient, and then multiplied into itself, and having 52 subtracted from the product, and the square root of the remainder extracted, and 8 added, and the sum divided by ten, yields 2."
—*Colebrooke*, p. 21.

2. "Beautiful and dear Lilávati (delightful), whose eyes are like a fawn's, tell me what are the numbers resulting from 135 taken into 12. If thou be skilled in multiplication, by whole or by parts, whether by subdivision of form, or separation of digits, tell me, auspicious woman, what is the quotient of the product divided by the same multiplier?"
—*Colebrooke*, p. 6.

3. "Out of a swarm of bees, $\frac{1}{5}$ part settled on a blossom of Cadamba (*Nauclea Orientalis*), and $\frac{1}{3}$ part on a flower of Sulind'hri (a plant resembling the Cachóra); 3 times the difference of those numbers flew to the bloom of a Cutaja; 1 bee, which remained, hovered and flew about in the air, allured at the same moment by the pleasing fragrance of a jasmin and pandanus. Tell me, charming woman, the number of bees."
—*Colebrooke.*

4. In what time will an annual pension of $500 *amount* to $3,450 at 6 per cent. simple interest? I. B.

5. A laborer engaged to work 10 days, on condition that he should have 12 dimes for a day's labor, and pay 2 dimes for every idle day for board; he received as many dollars as he worked days. How many days was he idle? I. B.

6. Archimedes is said to have calculated the number of grains of sand contained in the *Cosmos* — the sphere of which the earth is the center, and its radius the distance of the sun. How did he calculate the number, and what answer did he obtain? LEON.

7. A, B, and C, with their wives (P, S, and V), went to market to buy pigs. Each man and each woman bought as many as they gave shillings for each pig. A bought 23 pigs more than S; B bought 11 more than P; also each man paid out 63 shillings more than his wife. Which two persons were man and wife? LEON.

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QUESTIONS.

1. (*a*) At what period and where was the letter Z pronounced *zed*, or *izzard?* Methinks the spelling of the word *gizzard* must needs have been cumbersome.

(*b*) I think I have seen it stated that the publishers of Webster's "New Illustrated Dictionary" offered a prize to any one reporting any typographical errors. Were any found, and if so, what were they?

(*c*) The word *Amen*, a dissyllable, has two accents, *a-men*, and *á-men*. What other examples does the English language contain?

(*d*) Several years ago, a New York evening party called for a morning prayer, an appropriate accompaniment to the famous evening prayer of childhood—"Now I lay me down to sleep." Many contributions were sent in. Was any one adopted, and if so, what?

(*e*) What is the origin of the "XXX" sign relating to manufacturing of ale?

(*f*) What is the real origin of the so-called "powwowing" as set forth in the so-called "Sixth and Seventh Books of Moses," and the "Long Lost Friend" of George Jacob Hohman?

(*g*) How does a spider spin a thread across a highway from fence to fence.

(*h*) What is the origin of the phrase, "Robbing Peter to pay Paul?

(*i*) A person with congenital cataract can distinguish cubes from balls. After being operated on successfully can he distinguish them as such by the sense of sight alone?

(*j*) How do surnames beginning with the letter "I," in point of number, compare with those beginning with other letters?

(*k*) What per cent. of water is contained in animals, and also in vegetables?

(*m*) What is the correct pronunciation of *Schizomycetes*, *Ptomaines*, *Atzerodt?* ISRAEL.

(*l*) What are the most extreme temperatures observed, and where? also, the greatest degrees of heat and cold artificially produced?

2. (*a*) Who are the authors of, and where found, the following quotations: "Familiarity breeds contempt"; "Still waters run deep?"

(*b*) What is the legend of *Childe the Hunter?* J. G. D.

3. (*a*) If all beings had no ears would there be and *sound?*

(*b*) Could one who was born blind and has been taught to read with the fingers, read by the sense of sight if at once endowed with sight? A. S. H.

4. What is the technical name of such words as *Llewellyn*, *Lloyd*, *Llano*, etc., and from what language do these come? X.

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

"*There's a divinity that shapes our ends.*"—SHAKESPEARE.

VOL. VI. MARCH, 1889. No. 3.

THE PHŒNIX.

A PROSE POEM ATTRIBUTED TO LANCTANTIUS

There is a happy spot, retired in the first East, where the gate of the eternal pole lies open. It is not, however, situated near to his rising in summer or in winter, but where the sun pours the day from his eternal chariot. There a plain spreads its open tracts; nor does any mound arise, nor hollow valley open itself. But through twice six ells that place rises above the mountains, whose tops are thought to be lofty among us. Here is the grove of the sun; a wood stands planted with many trees, blooming with the honor of perpetual foliage. When the pole blazed with the fires of Phaeton, that place was uninjured by the flames; and when the deluge had immersed the world in waves, it rose above the waters of Ducalion. No enfeebling diseases, no sickly old age nor cruel death, nor harsh fear, approaches hither, nor dreadful crime, nor mad desire of riches, nor Mara, nor fury, burning with the love of slaughter. Bitter grief is absent, and want clothed in rags, and sleepless cares, and violent hunger. No tempest rages there, nor dreadful violence of the wind; nor does the hoar-frost cover the earth with cold dew. No cloud extends its fleecy covering above the plains, nor does the turbid moisture fall from on high; but there is a fountain in the middle, which they call by the name of "Living"; it is clear, gentle, and abounding with sweet waters, which, bursting forth once during the space of each month, twelves times irrigates all the grove with waters. Here a specie of

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tree, rising with lofty stem, bears mellow fruits not about to fall on the ground. This grove, these woods, a single bird, the phœnix, inhabits,—single, but it lives reproduced by its own death. It obeys and submits to Phœbus, a remarkable attendant. Its parent, nature has given it to possess this office. When at its first rising the saffron morn grows red, when it puts to flight the stars with its rosy light, thrice and four times it plunges its body into the sacred waves, thrice and four times it sips water from the living stream. It is raised aloft, and takes its seat on the highest top of the lofty tree, which alone looks down upon the whole grove; and turning itself to the fresh risings of the nascent Phœbus, it awaits his rays and rising beam. And when the sun has thrown back the threshold of the shining gate, and the bright gleam of the first light has shone forth, it begins to pour strains of sacred song, and to hail the new light with wondrous voice, which neither the notes of the nightingale nor the flute of the Muses can equal with Cyrrhæan strains. But neither is it thought that the dying swan can imitate it, nor the tuneful strings of the lyre of Mercury. After that Phœbus has brought back his horses to the open heaven, and continually advancing, has displayed his whole orb, it applauds with thrice-repeated flapping of its wings, and having thrice adored the fire-bearing head, is silent. And it also distinguishes the swift hours by sounds not liable to error by day and night; an overseer of the groves, a venerable priestess of the wood, and alone admitted to thy secrets, O Phœbus. And when it has now accomplished the thousand years of its life, and length of days has rendered it burdensome, in order that it may renew the age which has glided by, the fates pressing it, it flees from the beloved couch of the accustomed grove. And when it has left the sacred places, through a desire of being born again, then it seeks this world, where death reigns. Full of years, it directs it swift flight into Syria, to which Venus herself has given the name of Phœnice; and through trackless deserts it seeks the retired groves in the place where a remote wood lies concealed in the glens. There it chooses a lofty palm, with top reaching to the heavens, which has the pleasing name of Phœnix, fromthe bird, and where no hurtful living creature can break through, or slimy serpent, or any bird of prey. Then Æolus shuts in the winds in hanging caverns, lest they should injure the bright air with their blasts, or lest a cloud collected by the south wind through the empty sky should remove the rays of the sun, and be a hindrance to the bird. Afterwards it builds for itself either a nest or a tomb, for it perishes that it may live; yet it reproduces itself. Hence it collects juices and odors, which the Assyrian gathers from the rich wood, which the wealthy Arabian gathers; which also either the Pygmæan nations, or India crops. or the Sabæan land produces from its soft bosom. Hence it heaps together cinnamon and the odor of the far-scented amommum,

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and balsams with mixed leaves. Neither the twig of the mild cassia nor of the fragrant acanthus is absent, nor the tears and rich drops of frankincense. To these it adds tender ears of flourishing spikenard, and joins the two pleasing pastures of myrrh. Immediately it places its body about to be changed on the strewed nest, and its quiet limbs on such a couch. Then with its mouth it scatters juices around and upon its limbs, about to die with its own funeral rites. Then amid various odours it yields up its life, nor fears the faith of so great a deposit. In the meantime, its body, destroyed by death, which proves the source of life, is hot, and the heat itself produces a flame; and it conceives fire afar off from the light of heaven; it blazes, and is dissolved into ashes. And these ashes collected in death, it fuses, as it were, into a mass, and has an effect resembling seed. From this an animal is said to arise without limbs, but the worm is said to be of a milky color. And it suddenly increases vastly with an imperfectly formed body, and collects itself into the appearance of a well-rounded egg. After this it is formed again, such as its figure was before, and the phœnix, having burst its shell, shoots forth, even as caterpillars in the fields, when they are fastened by a thread to a stone, are wont to to be changed into a butterfly. No food is appointed for it in our world, nor does any one make it his business to feed it while unfledged. It sips the delicate ambrosial dews of heavenly nectar which have fallen from the star bearing pole. It gathers these; with these the bird is nourished in the midst of odors, until it bears a quite perfect natural form. But when it begins to flourish with early youth, it flies forth now about to return to her native abode. Previously, however, it encloses in an ointment of balsam, and in myrrh and dissolved frankincense, all the remains of its own body, and the bones or ashes, and relics of itself, and with pious mouth brings it into a round form, and carrying this with its feet, it goes to the rising of the sun, and tarrying at the altar, it draws it forth in the sacred temple. It shows and presents itself an object of admiration to the beholder; such great beauty is there, such great honor abounds. In the first place, its color is like the brilliancy of that which the seeds of pomegranate when ripe takes under the smooth rind; such color as is contained in the leaves which the poppy produces in the fields, when Flora spreads her garment beneath the blushing sky. Its shoulders and beautiful breasts shine with this covering; and its head, with its neck also, and the upper parts of its back, shine. And its tail is extended, varied with yellow metal, in the spots of which mingled purple blushes. Between its wings there is a bright mark above, as Iris on high is wont to paint a cloud from above. It gleams resplendent with a mingling of the green emerald, and a shining beak of pure horn opens itself. Its eyes are large; you might believe that they were two jacinths; from the middle of which a bright flame

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shines. An irradiated crown is fitted to the whole of its head, resembling on high the glory of the head of Phœbus. Scales cover its thighs spangled with yellow metal, but a rosy color paints its claws with honor. Its form is seen to blend the figure of the peacock with that of the painted bird of Phasis. The winged creature which is produced in the land of the Arabians, whether it be beast or bird, can scarcely equal its magnitude. It is not, however, slow, as birds which through the greatness of their body have sluggish motions, and a very heavy weight. But it is light and swift, full of royal beauty. Such it always shows itself in the sight of men. Egypt comes hither to such a wondrous sight, and the exulting crowd salutes the rare bird. Immediately they carve its image on the consecrated marble, and mark both the occurrence and the day with a new title. Birds of every kind assemble together; none is mindful of prey, none of fear. Attended by a chorus of birds, it flies through the heavens, and a crowd accompanies it, exulting in the pious duty. But when it has arrived at the regions of pure ether, it presently returns; afterwards it is concealed in its own regions. But Oh, bird of happy lot and fate, to whom the god himself granted to be born from itself! Whether it be female, or male, or neither, or both, happy it, who enters into no compacts with Venus. Death is Venus to it; its only pleasure is in death; that it may be born, it desires previously to die. It is an offspring to itself, its own father and heir, its own nurse, and always a foster-child to itself. It is itself indeed, but not the same, since it is itself, and not itself, having gained eternal life by the blessing of death.

———o—o———

A Curious Bill. The following curious bill is reported to be a true copy from the records of a church in England. Can any reader confirm the authenticity of this statement, or is it merely a ficticious facetia?

Djafar.

Winchester, October, 1182.

For work done by Peter M. Sollers:

	sh.	d.
In soldering and repairing St. Joseph, . . .	0	3
Cleaning and ornamenting the Holy Ghost, . .	0	6
Repairing the Virgin Mary behind and before, and making a new child, .	4	8
Screwing a nose on the Devil, and placing a new joint in his tail, .	6	6

Paid December, 1182.

P. M. Sollers, Church Mason.

Long Name. There is a town in Wales that glories in the name of "Llanfairpwllgwyngyllgogerychwyrndrobwllllantysiliogogogoch."

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Waste-Basket of Words.

[From Journal of American Folk-Lore, Vol. I ,No. II, 1888.]

Æstuation.—"The good father could not discourse of this subject without some passionate *Æstuation.*" Sewell's Letter-Book, vol. i, p. 193.—H. W. Heynes, Boston, Mass.

Barn.—"To dry the corne, which they (the Indians) do carefully upon heaps and mats many days before they *barn* it up." Roger Williams' "Key into the Language of America" ("R. I. Hist. Soc. Rep." p. 92). The word is used in a similar sense by Shakespeare. "Rape of Lucrece," l. 859: "And useless *barns* the harvest of his wits."—H. W. Haynes.

Ill.—Used by negroes in Washington very much as *ugly* is often employed at the North. The negro mentioned says a horse that is cross, or threatens harm, is *ill*, though in excellent health.—W. H. Babcock, Washington, D. C.

Levit.—"Monday, January 1, 1704-5, Col. Hobbey's negro comes about 8 or 9 *mane*, and sends in by David to have leave to give me a *Levit* and wish me a happy new year. I admitted it: gave him 3 reals. Sounded very well." Sewell's Diary, vol. ii. p. 121. The editors append this note: "Levit—a blast of a trumpet." The word is found in Hudibras, p. ii. c. ii. l. 611.—H. W. Haynes.

Mammock.—This word, referred to in the first number of the FOLK-LORE JOURNAL, is still in use in the District of Columbia. A colored man employed by me frequently complains that the cows "*mammock* the hay" so badly.—W. H. Babcock.

Retaliation.—This word has fared like *resent*, quoted in the last number. Formerly it was used in a good sense, as well as in a bad one. In the "Boston Town Records," March 11, 1700, we find a vote, "That the Selectmen should cause a piece of plate to be made of the value of 20 pounds, and present the same to Mr. James Taylor as a small *retaliation* of his service and kindness to the Town." "Seventh Report of Record Commissioners," p. 240.—H. W. Haynes.

Inned.—In the "Lawes and Ordinances of Warre," passed by the General Court of the Colony of Massachusetts, in 1675, is an order for "securing the graine *inned* in the barnes of the several inhabitants." "Colonial Laws" (Whitmore's reprint), p. 240. This word is used by Shakespeare in "All's Well that ends Well," A. i. Sc. 3, "to *inn* the crop."—H. W. Haynes.

Quarrels.—"Something was thrown forcibly against the upper part of the north window, and five or six *quarrels* broken out." Sewell's Diary, Nov. 27, 1719, vol. iii, p. 235.—H. W. Haynes.

Shanty.—The dictionaries give the derivation of this word as from the Irish *sean*, old, and *tig*, a house; but Dr. Bouvinot says it is a

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corruption of *chantier*, used by the French Canadians. See "Scottish Review," April, 1887, vol. ix. p. 257.—H. W. Haynes.

Sign.—Constantly used in Washington as a term for marking off the land for corn or potatoes.—W. H. Babcock.

—o—o—

BARDESANES' ASTRONOMICAL CALCULATIONS. Bardesanes, the gnostic, a Syrian who lived in the latter part of the second century at Edessa, and who was a favorite of Agbar Bar Maanu, is memorable for the peculiarity of his doctrines. He calculated at that early date the completion of 6,000 years, in solar days, the revolution of the then known heavenly bodies, and put it on record so that future ages could test his calculations. The following table will show a comparison of his record with modern calculations. This table is calculated on the sidereal revolutions in solar days, as given in H. M. Bouvier's "Familiar Astronomy," 1857, p. 469. His approximations are quite remarkable for the time in which they were made.

Bodies.	Bardesanes' Round Multipliers.	6,000 Years, Solar Days. Bardesanes' Approximations.	Round Multipliers.	6,000 Years, Solar Days. Nearer Approximations.
Sun,	60,000	1,507,800.	87,000	2,186,310.
Mercury,	24,000	2,111,262.192	25,000	2,199,231.45
Venus,	7,200	1,617,896.6568	9,700	2,179,597.6329
Earth,	6,000	2,191,538.1672	6,000	2,191,538.1672
Mars,	4,000	2,747,918.832	3,299	2,198,334.8665
Jupiter,	500	2,166,292.4106	500	2,166,242.4106
Saturn,	200	2,151,843.96348	200	2,151,843.9634
Uranus,			700	2,148,077.458
Neptune,			400	2,405,068.4
Moon,			8,000	2,185,732.9144

EPITAPH ON DIOPHANTUS. The following epitaph on Diophantus is found in "Mathematical Questions and Solutions from the *Educational Times*," Vol. XLIX, 1888. Will some one give an English translation for those who cannot read the Latin:

Hic Diophantus habet tumulum, qui tempora vitæ
Illius mira denotat arte tibi.
Egit sextantem juvenis; lanugine malas
Vestire hinc coepit parte duodecima.

Septante uxori post hæc sociatur, et anno
Formosus quinto nascitur inde puer.

Semissem ætatis postquam attigit ille paternæ
Infelix subita morte peremptus obit.
Quator æstates genitor lugere superstes
Cogitur: hinc annos illius assequere. H.

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ENGLISH KINGS AND QUEENS. William the Conqueror died from enormous fat, drink, and the violence of his passions, Sept. 9, 1087.

William II, Rufus, killed by an arrow, while hunting, Aug. 2, 1100.

Henry I, Beauclerc, died of a surfeit, Dec. 1, 1185.

Henry II, Plantagenet, died of a broken heart, July 6, 1189.

Richard I, Cœur de Lion, died from a wound made by an arrow, April 6, 1199.

John, died no body knows how, Oct. 19, 1216.

Henry III is said to have died a natural death, Nov. 16, 1272.

Edward I, Longshanks, died from "natural sickness," July 7, 1307.

Edward II, murdered at Berkeley Castle, Sept 21, 1307.

Edward III died from dotage, June 27, 1377.

Richard II, the Black Prince, murdered at Pomfret Castle, Feb. 10, 1310.

Henry IV died from fits of "uneasiness," March 20, 1314.

Henry V died from "painful affliction, prematurely," Aug. 31, 1422.

Henry VI murdered by Richard, duke of Gloucester, in the Tower, June 20, 1471.

Edward IV died a natural death, April 9, 1483.

Edward V murdered in the Tower, by duke of Gloucester.

Richard III slain at Bosworth, Aug. 22, 1485.

Henry VII wasted away, died April 21, 1509.

Henry VIII died from carbuncles, Jan. 28, 1547.

Edward VI (by Jane Seymour) died of decline of years, July 6, 1553.

Queen Mary is said to have died of a broken heart, Nov. 17, 1558.

Queen Bess (by Anne Boleyn) died of melancholy, March 24, 1603.

James I died from drinking, March, 1619.

Charles I beheaded at Whitehall, Jan. 30, 1649.

Charles II died suddenly of apoplexy, Feb. 6, 1585.

William III, Prince of Orange, died from effects of the stumblin of his horse, March, 8, 1702.

George I died from apoplexy, June 11, 1727.

George II died from a rupture of the heart, Oct. 25, 1760.

George III died a natural death, Jan. 29, 1820.

George IV died of gluttony, June 26, 1830.

William IV, brother of George IV, died June 20, 1837.

Queen Victoria, born May 24, 1819 ; succeeded to the throne June 20, 1837 ; crowned June 28, 1838 ; married Feb. 10, 1840 ; reigning.

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Palindromes — For the Young Folks.

—o——o—

1. Yreka Bakery.
2. Madam, I'm Adam.
3. Name no one man.
4. Red root put up to order.
5. Draw pupil's lip upward.
6. Able was I ere I saw Elba.
7. Snug & raw was I ere I saw war & guns.
8. Trash, even interpret Nineveh's art.
9. Lewd did I live & evil I did dwel.
10. Red rum did emit revel ere Lever time did murder.
11. Stiff, O dairyman, in a myriad of fits.
12. No, it is opposed, art sees trade's opposition.
13. Now stop, Major General, are negro jam-pots won.
14. But ragusa stare, babe, rats a sugar tub.
15. No, its a bar of gold, a bad log for a bastian.
16. Stop, Syrian, I start at rats in airy spots.
17. Desserts desire not, so long no lost one rise destressed.
18. No sot nor Ottawa law at Toronto, son.
19. Paget saw an Irish tooth, Sir, in a waste gap.
20. Name tarts, no medieval slave, I demonstrate man.
21. Eureka, till I pull up ill, I take rue.
22. I am God, deified, dogma I.
23. Ned, I am now a won maiden.
24. O had I Idaho.
25. Evil Elba I may amiable live.
26. Madam, Adam did live ere evil, did Adam, Madam ?
27. Madam saw Aaron tar a rat; Nora A. was madam.

—o——o—

1. Ablata at alba.
2. Si nummi immunis.
3. Sator arepo tenet opera rotas.
4. Odo tenet mulum, madidam, mulum tenet Odo.
5. Anna tenet mappan, madidam, mappan tenet Anna.
6. Signa te signa; temere me tangis et angis.
7. Roma tibi subito motibus ibit amor.
8. Acide me malo, sed non desola me, medica.
9. Arca serenum me gere regem, munere sacra.
10. Solem, arcas, animos, omina, sacra, melos.

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Questions and Answers.

THE CYCLADES. Where are the Cyclades, and what are the modern names? ANDREW.

The name *Cyclades* was applied by the ancient Greeks to that cluster of islands encircling (*kuklos*) Delos on the south-east of Greece. Strabo says at first the Cyclades were only 12 in number, but were afterwards increased to 15. Anthon gives 16. Their ancient and modern names are :

Delos,	Delo, Deli, Sdilli.	Oleăros,	Antiparo.
Ceos,	Zea.	Păros,	Paro.
Cythnos,	Thermia.	Naxo,	Naxia.
Serīphos,	Serpho.	Syros,	Syra.
Mĕlos,	Milo.	Mycŏnos,	Myconi.
Siphnos,	Siphanto.	Tenos,	Tino, Hydrussa.
Cimōlus,	Cimoli, Argentiera.	Andros,	Andro.
Prepesinthus,	Spotiko, Despotiko.	Gyărus,	Ghioura.

The Sporades (*scattered*) are the islands scattered around the Cyclades, and those also that lay toward Crete and the coast of Asia Minor. They are the following :

Thera,	Santorin.	Amorgos,	Amorgo.
Anăphe,	Anpnio.	Astypalēa,	Staeplia.
Ios,	Nio.	Tēlos,	Episcopia.
Sicinos,	Sikino.	Nisyrus,	Nisari.
Pholegandros,	Policandro.	Carpăthus,	Scarpanto.
Donysa,	Raclia.		

ISAIAH THOMAS. Who can give me a brief sketch of Isaiah Thomas, the antiquarian? ELPIS.

Isaiah Thomas was the son of Moses Thomas. He was born in 1749. His father died when he was young. At the age of six years he was put out as an apprentice to Z. Fowle, with whom he remained eleven years. In 1770, he commenced in Boston the publication of the Massachusetts *Spy*, in which paper he published many spirited articles against the oppressive laws of the British Parliament towards the New England Colonies. In 1771, Gov. Hutchinson and Council, on account of an article that appeared in the *Spy*, endeavored to bring Mr. Thomas before them, but so much resistance was made that the measure was finally dropped. In 1775, he removed his paper to Worcester, and three years after opened a bookstore in Boston. At

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one time he had under his control sixteen presses in use, and eight bookstores. He issued a folio edition of the Bible in 1791. In the latter part of his life Mr. Thomas founded the American Antiquarian Society, for which he erected a brick block at Worcester, and of this Society he was president and a most liberal patron. The honorary degree of Doctor of Laws was conferred upon him by the Alleghany College, Pennsylvania. In 1810 he published in two volumes, octavo, a valuable "History of Printing in America," which show an immense amount of research. He died at Worcester, April 4, 1831, at the age of 82 years.

"MILLIONS." (Vol. VI, p. 236; 246.) Your correspondent asks where the word *millions* is first found (p. 236,) and later on he is referred to Genesis XXIV, 60. The Latin Vulgate version reads "*mille millia*" (a thousand thousands), although the Douay translation reads "thousands of thousands." In Robert Recorde's arithmetic no mention of "millions" is made. The edition of 1557 is entitled:

"The whetstone of witte, whiche is the seconde parte of Arithmetike: containyng the xtraction of Rootes: The Cossike practise, with the rule of Equation: and the workes of Surde Numbers." Quarto.

It is scarcely remembered that the old name of Algebra, the *cossic* art (from *cosa*, a thing), gave this first English work on algebra the punning title, "the *whetstone* of witte," *Cos* ingenii. The following example from Recorde illustrates decimal enumeration when above 999,999:

"A general rule.—Scholar. If I make this number 91359684, at all adventures there are eight places. In the first place is 4, and betokeneth but four; in the second place is 8, and betokeneth ten times 8, that is 80; in the third place is 6, and betokeneth six hundred; in the fourth place 9 is nine thousand; and 5 in the fifth place is XM times five, that is fifty M. So 3 in the sixth place is CM times 3, that is CCCM. Then 1 in the seventh place is one MM; and 9 in the eighth is ten thousand thousand times 9, that is XCMM, *i.e.* XC thousand thousand CCCLIX thousand, 684, that is VICLXXXiiij."

It is obvious the word million had no popular currency at this period.

SAMUEL T. HAMCOMB.

ORIGIN OF THE WORD "ONTONAGON." We are informed by an eighteen-years' resident of the town of Ontonagon in the north of Michigan, near the border of Lake Superior, that a legend says an In-

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dian maiden was sent to the stream to bring a bowl of water. She stepped into the canoe floating on the side of the stream and reaching over the side to scoop up the clear water, the swift current forced the bowl from her hand and it went floating down with the current. The maiden, with uplifed hands, exclaimed *Ontonagon ! Ontonagon !* "I've lost my bowl!" "I've lost my bowl?" CLARK.

WHO MADE THE FIRST BOAT. A correspondent (T. H.) asked this question several months ago, and we copy for his information from the "Testament of the Twelve Patriarchs," *Zebulun* 6:

"I was the first who made a boat to sail upon the sea, for the Lord gave me understanding and wisdom therein; and I let down a rudder behind it, and I stretched a sail upon the upright mast in the midst; and sailing therein along the shore, I caught fish for the house of my father until we went into Egypt: and through compassion I gave fish to every stranger. And if any man were a stranger, or sick, or aged, I dressed the fish well and boiled them, and offered them to all men as every man had need, bringing them together and having compassion upon them. For five years I caught fish, and gave to every man whom I saw, and brought sufficient to the house of my father."

MDCLXVI=1666. (Vol. V, p. 148.) We do not think the era adopted by the Materialist (1666) had anything whatever to do with the Roman numerals (IVXLCDM) reversed, but regard this fancy as a coincidence. Will some Materialist explain why they date their era E. M. (Era of Materialism) from 1666?

There was a tract in the possession of Mr. Wrangham, England, entitled *Romæ Ruina Finalis, Anno Dom. 1666.* Some apocalyptic student discovered the date in "ALEXANDER EPIS-COPUS ROMÆ": L (50), X (10), D (500), I (1), C (100), V (5), M (1000) = 1666. This contained the full complement of the Roman numerals. Hence Rome was to fall in 1666.

HIGHEST PEAK IN THE WORLD. According to Gaskell's "New Family Atlas," Mount Hercules in New Guinea, is now claimed to be the highest peak in the world. The height is given as 32,768 feet; while the same authority gives Mount Everest, of the Himalaya Range, as 29,002 feet; so that Mount Hercules leads the world as the highest peak by 3,766 feet; or Mount Hercules is 6 miles high, and 1088 feet more.

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THE GREEK ANTHOLOGIES. What are the Greek anthologies which are so frequently referred to and quoted from? A. K. G.

The Greek anthologies (*Blumenlesen*) are collections of small poems, chiefly epigrams, of various authors. Many of the pieces are remarkable for their beauty and simplicity in thought, and their peculiar terms of expression. These collections began to be compiled during the decline of Greek literature. Several of these collections were made before the fall of Carthage, but seem to have been formed with more reference to their historical value of the inscriptions than to their poetical merit. The collection of Polemo Periegetes was of this early class, which are entirely lost. Next to these the first of which we have any knowledge was made by Meleager of Gadara in Syria, B. C. 100 nearly. It was entitled *Stéphanos*, the crown or karland, and contained the better pieces of 46 poets, arranged alphabetically. The next collection was by Philippus of Thessalonica, in the time of Trajan, with the same arrangement. Soon after, under Hadrian, about A. D. 120, a collection of choice pieces was formed by Diogenianus of Heraclea. About 100 years later, Diogenes Laertius gathered a collection of epigrams composed in honor of illustrious men. From the variety of meters in them, it was styled *Pámmeton*. In the 2d or 3d century Strato of Sardis published a compilation, including most of the poets embraced in the anthology of Meleager, and some of those embraced in the works of Phillipus, together with several others. It was entitled *Paidikè Moūsa*. But that which may be considered as a third anthology was published in the 6th century by Agathias of Myrina, who was one of the most eminent epigrammatists after the time of Constantine. This collection bore the title of *Kūklos*, and consisted of seven books, into which the pieces were distributed according to their subjects. In the 10th century a fourth collection was made by Constantine Cephalas, of whom nothing else is known. In preparing it he made use of the preceding compilations, especially that of Agathias, but inserted pieces of ancient authors not introduced in them. The epigrams and other pieces are arranged according to subjects, in fifteen sections. Finally, in the 14th century, Maximus Planudes, a monk of Constantinople, the same person who collected the fables of Æsop, formed a fifth anthology. Planudes arranged the pieces, included in his collection, in seven distinct books.

The two last-mentioned collections, that of Cephalas and that of

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Planudes, are the only anthologies now extant. That of Planudes was first printed in 1494, and the collection of Cephalas was, after that, almost entirely forgotten. In 1606, a manuscript copy of Cephalas was found by Claude Saumaise (Claudius Salmasius) in the library at Heidelberg.

THE SPORTSMAN'S PROBLEM. (Vol. VI, p. 235.) The conditions of this problem are inconsistent, as the solution will show.

If 5 be added to $\frac{1}{3}$ of the birds I took last year, it will make $\frac{1}{2}$ of the number I have taken this year; but if from 3t imes this last half, 5 be taken, you will have the number taken last year. How many did I take each year? JONAS.

Let $x =$ the number taken this year, and $y =$ the number last year.

$$\frac{x}{2} = \frac{y}{3} + 5, \qquad y = \frac{3x}{2} - 5.$$

Substituting in the first equation the value of y in the second,

$$\frac{x}{2} = \frac{x}{2} - \frac{5}{3} + 5. \qquad \therefore\ 3x - 3x = 30 - 10. \quad 0 = 20.$$

This is an absurb equality, when we conclude that there exists no values of x and y which satisfy the two equations.

PROBLEM OF EXPENDING 1000 FRANCS. (Vol. VI, p. 235.) There are five solutions, and *only five*, to this problem.

A company of men and women expend at a feast 1000 francs. The men pay each 19 francs, and the women 11 francs. How many men and how many women are there? L. O. K.

(1)	4	men and	84	women.
(2)	15	men and	65	women.
(3)	26	men and	46	women.
(4)	37	men and	27	women.
(5)	48	men and	8	women.

A GNOMON IN GEOMETRY. (Vol. VI, p. 236.) A gnomon in geometry is the area between two rectangles, when one lies within the other, and having the boundaries of two sides common. Construct a rectangle (say 9 by 16), A B C D; from C, on C D, lay off C E equal to 12; from C, on C A, lay of C F equal to 7; complete a rectangle F C E G, within in A B C D, equal to 7 by 12; then the area of the gnomon is $(9\times16)-(7\times12)=60$.

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SATURDAY AN UNLUCKY DAY. Has any other day than Friday appeared to be an "unlucky day"? LEWIS HOLDEN.

The following record shows that for 176 years *Saturday* has been a fatal day to the Royal family of England, the following having died on that day:

William III,	March 18, 1702	George IV,	June 26, 1830
Queen Anne,	August 1, 1714	Duchess of Kent,	March 16, 1861
George I,	June 19, 1727	Prince Albert,	Dec. 14, 1861
George II,	Oct. 25, 1760	Princess Alice,	Dec. 14, 1878
George III,	Jan. 29, 1820		

THE TRADITION OF THE MOON AS ONCE COMING NEAR THE EARTH. What gave rise to the story told us by our ancestors, that the moon, once on a time came very near the earth? LLEWELLYN.

There was such a tradition that the moon had been within reaching distance of this earth. We have heard old people in New England relate the same tradition, and recently we read a chapter in a very old book, "The Testament of the Twelve Patriarchs," *Naphtali* 5, that possibly may have given rise to such story. We copy it here for the information of this questioner:

"In the fortieth year of my life, I saw on the Mount of Olives, at the east of Jerusalem, that the sun and the moon were standing still. And behold Isaac, the father of my father, saith to us, Run and lay hold on them, each one according to his strength; and he that seizes them, his shall be the sun and moon. And we all of us ran together, and Levi laid hold of the sun, and Judah outstripped the others and seized the moon, they were both of them lifted up with them. And when Levi became as a sun, a certain young man gave to him twelve branches of palms; and Judah was bright as the moon, and under his feet were twelve rays. And Levi and Judah ran and laid hold each of the other. And lo, a bull upon the earth having two great horns, and an eagle's wings upon his back; and we wished to seize him but could not. For Joseph outstripped us, and took him, and ascended up with him on high. And I saw, for I was there, and behold a holy writing appeared to us, saying: Assyrians, Medes, Persians, Elamites, Gelachæans, Chaldeans, Syrians, shall possess in captivity the twelve tribes of Israel."

Undoubtedly there is an intrepretation of this record that would explain it as to the future of the twelve tribes; like Joseph's dream of the eleven stars making obeisance to him, the sun and moon standing still at the command of Joshua, and others; the true meaning does not appear upon the surface.

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TOUR OF THE CHESS KNIGHT. (Vol. V, pp. 222, 234, 245.) I was formerly much interested in chess and problems pertaining thereto. The tours given in your pages revives those bygone days. The quotation from Shakespeare puzzled me as to where to begin, but your contributor (G. S. C., p. 245) has given it correct, as reference to the play *King John* shows. I send you a tour arranged by one Percy Searle in the palmy days of chess. LEANDER L. THORNE.

board	est	were	rious	nev	thy	might	tor
umphs	vic	with	on	the	hail	er	troops
lead	quered	price	rals	glo	ier	vic	thou
to	tri	the	man	his	gene	to	er
che	ed	won	of	on	by	than	less
his	ry	up	wars	y	blood	ring	ty
aid	while	mor	le	lone	tain	blood	na
hail	on	un	thou	phy	po	a	cer

The publishers will add here that we will send Vol. I, Nos. 1-20, free to the first person from whom we receive the correct answer to this tour.

JORDANO BRUNO'S TRIADS. Bruno was roasted alive Feb. 17, 1600.

"Efficiunt totum Casus, Natura, Voluntas,
Dat triplicem mundum Deitas, Natura, Mathesis,
Hinc tria principia emanant Lux, Spiritus, Unda,
Est animus triplex Vita, Sensu, Ratione."

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QUESTIONS.

—o——o—

1. Can some reader inform me who is the author of, and where the poem can be found, entitled *Sometime.* The first lines I give from memory : P. M. C., Newark, N. J.

" God's plans like lilies pure and white unfold,
We must not tear the close shut leaves apart,
Time will reveal the calyxes of gold."

2. From whom does the botanical herb *John's-wort* derive its name, and why? Z.

3. Was Robert B. Thomas, of almanac fame, a near relative of Isaiah Thomas, also a publisher of almanacs ? MARS.

4. Burritt's " Geography of the Heavens," p. 132, says there were ten stars in the zodiacal sign *Capricornus* (the Goat), known as the " Tower of Gad " ; which are the stars by name, and why so called?

Why is the constellation *Delphinus* (the Dolphin) known by the name of " Job Coffin " ?

Also, why are the three stars in Orion—the Ell or Yard—known as " Jacob's Staff " ? A. J. BOYLE.

5. The following quotation is credited to Virgil ; where is it found?

" Macte nova virtue puer; sic itur ad astra;
Diis genite, et geniture, Deos."

" Go on spotless boy, in the paths of virtue ; it is the way to the stars ; offspring of the gods thyself ; so shalt thou become the father of gods."

To whom is this addressed ? HULDAH B. BENSON.

6. What was the deficiency in Babbage's Calculating Machine, that it was not manufactured and put on sale? C. S.

7. How do the dimensions of the Great Eastern compare with the best estimates of Noah's Ark, based on the dimensions as given in the Bible ? HANNAH.

8. What was the largest newspaper ever printed in the United States ?

Has Congress ever granted assistance for the construction of the " Three Americas Railway " an enterprise proposed by Hinton Rowan Helper, to build a railroad from the Great Lakes south through North, Central, and South America ? XENIA.

9. Ludolph Van Ceulen, in his Dutch work on the circle, closes his speculations with these Latin quotations. Please give us a free translation : TYRO.

" *Constat ergo numeros rite esse inventos.*"

" *Cujus rei soli Deo debetur gloria.*"

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

"The soul has three vehicles: first, etherial; second, aerial; third, terrestrial."
—THOMAS TAYLOR.

VOL. VI. APRIL, 1889. No. 4.

The Kabbalah.

—o—o—o—

Several times in your pages you have mentioned the Kabbalah. I would like to know more of it and its import. OSCAR C. WEBB.

The Kabbalah may be defined as the esoteric Jewish doctrine, applied to the Scriptures to bring out its concealed meaning. It is generally under four heads : Practical, Literal, Unwritten, and Dogmatic. The second, or Literal, is the most important, and is divided into three divisions : Gematria, words of similar numerical value ; Notaricon (a word meaning shorthand writer), of which there are two kinds, one, each letter of the word is taken as the initial of another word, the other form is the exact reverse ; Temura, is when the letters are permutated. We will here give some examples of each class :

Gematria. The letters of the word MTTRVN, *Metatron,* according to the value assigned to each by the Hebrew, sum 314, and also the letters of the name of the Deity SHDI, *Shaddaï* sum 314 ; hence the name of the angel is taken for the Deity and *vice versa.* Metatron is said to have been the conductor of the children of Israel through the wilderness, and of whom it is recorded that God said : "My name *is* in him" (EX. XXIII, 21). The Gematria of phrases is as follows : IBA SHILH, *Yeba Shiloh,* "Shiloh shall come" (Gen. XLIX, 10),

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sums 358 ; which is also the sum of the letters in MShICh, *Messiah* (Dan. IX, 25). Again, VHNH ShLShH, *Vehenna Shalisha*, "And lo, three men" (Gen. XVIII, 2), sum 701 ; this amount being equal to the sum of ALV MIKAL GBRIAL VRPAS, *Elo Mikhael, Gabriel Ve-Raphael*, "These are Michael, Gabriel, and Raphael."

Notaricon. The following will illustrate this form of the Kabbalah : The first of Genesis is BRAShITh, *Bersahith*, "Genesis." Each letter is made the initial of a new word :

BRAShITh RAH ALHIM ShIQBLV IShRAL ThVRH,
Besrashith Rahi Elohim Sheyequebelo Israel Torrah,
"In the beginning God saw that Israel would accept the law."

In this connection we will give six interesting examples of notaricon formed from this same word "BRAShITh," by Meir Ben Moses, a Jewish Kabbalist, who embraced the Christian faith in 1665, and took the name of Prosper Rugere :

BN RVCh AB ShLVShThM IChD ThMIM,
(1) *Ben Ruach, Ab, Shaloshethem Yechad Themim,*
"The Son, the Spirit, the Father, Their Trinity, Perfect Unity."

BN RVCh AB ShLVShThM IChD ThOBVDV,
(2) *Ben, Ruach, Ab, Shaloshethem Yechad Thaubodo,*
"The Son, the Spirit, the Father, ye shall equally worship their Trinity."

BKVRI RAShVNI AShR ShMV IShVO ThOBVDV,
(3) *Bekori Rashuni Asher Shomo Yeshuah Thaubodo,*
"Ye shall worship My First-born, My First, whose name is Jesus."

BBVA RBN AShR ShMV IShVO ThOBVDV,
(4) *Beboa Rabban Asher Shamo Yeshuah Thaubodo,*
"When the Master shall come, Whose Name is Jesus, ye shall worship."

BThTLh RAVIH ABChR ShThLD IShVO ThAShRVh,
(5) *Bethula Rrriah Abachar Shethaled Yeshuah Thashroah,*
"I will choose a virgin worthy to bring forth Jesus, and ye shall call her blessed."

BOVGTh RTzPIM ASThThR ShGVPI IShVO ThAKLV,
(6) *Beaugoth Ratzephim Asvtar Shegopi Yeshuah Thokelo,*
"I will hide myself in cake (baked with) coals, for ye shall eat Jesus, My Body."

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The kabbalistic importance of these sentences as bearing on Christianity all must judge for themselves.

The second form of Notaricon is the exact reverse of the first. By this the initials, or finals, or both, or medials, of a sentence, are taken to form a word, or words. Thus the Kabbalah is called

CHKMH NSTHRH,
Chokhmah Nesthrah,
"The Secret Wisdom,"

If the initials of these two words be taken, CH and N, they form the word CHN, *Chen*, "Grace," which is the second form of Notaricon Similarly, from the initials and finals of the words, Deut. XXX, 12,

MI IOLH LNV HSHMIMH,
Mi Iaulah Lenu Ha-Shamayimah,
"Who shall go up for us to heaven?"

are formed from the initials MILH, *Milah*, "Circumcision"; from the finals IHVH (the tetragrammaton), *Jehovah*, implying that God has ordained that circumcision is the way to heaven. Again the tetragrammaton is found to form the initials of the four Hebrew words which are translated "Let the heavens rejoice, and the earth be glad" (Ps. XCVI, 11.) Also, the same four-lettered name is found to be the finals of the four Hebrew words translated "They will say to me, what *is* his name?" (Ex. III, 13.) There are many more illustrations in the Hebrew Scriptures, but let this suffice.

Temura is the third form of Kabbalah which is permutation. The alphabet is bent exactly in half, in the middle, and one half is put over the other; and then by changing alternately the first letter or the first two letters at the beginning of the second line, 22 commuattions are produced. These are called "Table of Combinations of TZIRVP, *Tziruph*." The method called Albath is formed thus:

11	10	9	8	7	6	5	4	3	2	1
K	I	T	CH	Z	V	H	D	G	B	A
M	N	S	O	P	TZ	Q	R	SH	TH	L

These Hebrew letters are found in Psalm CXIX, dividing it into eights. There are numerous examples of the application of Albath to peculiar words in the Hebrew writings, which will form the subject of a second chapter on this mode of interpretation.

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PURE SAXON-ENGLISH. The late William Barnes, author of the Dorset poems, a poet and clergyman, also a writer on grammar, says:

"What we want for the pulpit, as well as for the book, and the platform, and the people, is a pure, homely, strong Saxon-English of English stems, such as would be understood by common English minds and touch English hearts."

Here is a specimen of his own workmanship under these conditions.

"The mindstrength and body worksomeness of the Saxon, which are of great might for good when well spent, need a training in wisdom to keep them from mischief. The Saxon's mind . . . . . is destructive, and his sprackness wants the guidance of refined thought. Thence it is that seats put out at towns are often wantonly wrenched asunder, that bars and stiles are notched by bearers of an axe, that the guide-post is upset, and-coping-stones are pushed off bridge walls, and trees and shrubs are damaged, and the limb sprackness is spent in whittling sticks."

In his enthusiasm and his desire to get rid of foreign elements from the English language, Mr. Barnes suggested that it would be very easy to substitute genuine Saxon words for many of the classical or other foreign words which have found their way into the English vocabulary. Thus, instead of masculine and feminine he would speak of the *carl sex* and the *quean sex*, and for neuter would use *unsexly*. Some of his proposals will be found curious. The following list will show some of his proposed improvements:

Active,	Sprack.	Euthusiasm,	Faith-heat.
Altercation,	Brangle.	Generations,	Child-teams.
Ambassador,	Statespellman.	Haughty,	Overwindy.
Annals,	Year-bookings.	Horizon,	Skyedge.
Appendix,	Hank matter.	Magnificent,	High deedy.
Botany,	Wortlore.	Omnibus,	Folkwain.
Butler,	Cellar thane.	Perambulator,	Push-waining.
Criticism,	Deemsterhood.	Quadrangle,	Fourwinkle.
Democracy,	Folkdom.	Statics,	Weightcraftlore.
Electricity,	Fire-ghost.	Superanuated,	Overyeary.
Epidemic,	Manqualm.	Telegram,	Wire-spell.

Mr. Barnes wrote a short treatise on logic, of all subjects in the world, in exclusively English wording. With him logic was *rede-craft*, and a syllogism was a three-stepped *redeship*, or a redeship of three-thought puttings. His syllogisms have an exceedingly odd appearance, as follows:

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No horned beast is flesh-eatsome ;
Every dog is flesh-eatsome ;
Therefore, No dog is a horned beast.

Here is another three-stepped redeship :

Every cow is grass-eatsome ;
Every cow is two-horned ;
Therefore, Some one two-horned thing is grass-eatsome.

Here are two more specimens, which are sufficient :

Every two-horned beast is cud-chewsome ;
Every two-horned beast is grass-eatsome ;
Therefore, Some grass-eatsome beast is cud-chewsome.

Every cud-chewsome beast is cloven-footed ;
Every two-horned beast is cud-chewsome ;
Therefore, a cloven-footed beast is two-horned.

For a further development of Mr. Barnes's system of logic, see Archibald Ballantyne's "Wardour-Street English," in *The Bookmart*, Vol. VI, No. 67, pp. 381-387.

"SPELIN"—A UNIVERSAL LANGUAGE. Prof. George Bauer of Agram, Austria, has invented a universal language which he claims is simpler than Volapük, and much more euphonious.

"SPELIN YIKO SPAZ YOMAV."

"The deirvation of the word is : *S*+*pe*+*lin*.—*S* at the beginning of words is a symbol of collectiveness. *Pe* as a prefix means 'each,' hence *spe* means 'all,' *lin*=language, from the Latin "lingua" (with which we are familiar in 'linguist'). The word is pronounced *Spay-línn* (*i* like *i* in *machine*, but shorter."

The vowel scale is *i*, *e*, *a*, *o*, *u*, *œ*, arranged according to the acoustic series, as being the natural order ; i like *i* in machine ; e like *ey* in they ; a like *a* in father ; o like *o* in go ; u like *oo* in moon ; œ like *u* in but. The numerals are :

1	ik,	4	in,	7	if,
2	ek,	5	en,	8	ef,
3	ak,	6	an,	9	af

An s affixed to each makes them 10, 20, 30, etc. 100 is oc, 200 is ekoc, 400 is inoc ; 1,000 is uk, 100,000 is ocuk, 1,000,000 is lion ; or, 1,560,716 is lion enoc ansuk ifoc iksan. $\frac{8}{18}$ is iksaktil ak. March 1, 1889, is put *1889, luak, 1.* To double is yekœli ; to treble is yakœli.

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All nouns begin with a consonant. If we let v stand for a vowel, and c for a consonant, the forms which they take are: cvc (consonant, vowel, consonant; the normal type); cvcc, ccvc, ccvcc, cvvc, ccvvc, cvvcc, ccvvcc. The plural of nouns always ends in œs. There are no case variations; position distinguishes this.

For adjectives of geographical name and the four quarters of the heavens, is, ec, ac, oc, uc, are used; ic for all countries in Europe, ec in America, ac in Asia, oc in Africa, uc in Australia:

The names of countries in Europe end in im; in America in em; in Asia in am; in Africa in om; in Australia in um; while the five grand divisions of the globe are Sim, Sem, Sam, Som, Sum.

French,	Fransic,	Europe,	Sim,
Yanidic,	Netherlander,	America,	Sem,
Yozinlic,	Englishwomen,	Asia,	Sam,
England,	Inlim,	Africa,	Som,
Germany,	Dutim,	Australia,	Sum.
West Indies,	Indem,		
East Indies,	Indam,		

Subject, adjective, verb, adverb, direct object, numeral, indirect object, pronoun.

Pat gudir give ede bukœs ak yayuz al.

The good father gave three books to his boy yesterday.

It requires 222 letters to print the "Lord's Prayer" in Volapük, and only 191 in Spelin; while it requires 52 words in Volapük, and 58 in Spelin, there being no words of more than three syllables in the latter, while there are five words of more than three syllables in the former. A condensed translation in pamphlet can be obtained of Chas. T. Strauss, 424 Broadway, New York.

OCTONARY ARITHMETIC. Who was the first person to endeavor to introduce an octonary (8) system of arithmetic in place of the decimal (10) system? G. S. C.

William B. Taylor, in his "Report on Weights and Measures," made to the American Pharmaceutical Association, in 1859, gives the best account of the first attempt to supersede the decimal system in Sweden, and, so far as we are aware, the first anywhere. He says:

"The only correct account we have been able to obtain of the important movement of Charles XII toward superceding the decimal by the octonary system, throughout Sweden, is that contained in a volume entitled 'A Compendium of the Theological and Spiritual Writ-

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ings of Emanuel Swedenborg' (royal octavo), published by Crosby & Nichols, (Boston,) 1854. In the Life of Swedenborg prefixed to the 'Compendium,' it is said: 'In 1719, he published four works: First, *A Proposal for fixing the value of Coins and determining the Measures of Sweden, so as to suppress Fractions, and facilitate Calculations;* After this he was commanded by his sovereign to draw up an octonary computus, a mode of computing by eights,) which he completed in a few days, with its application to the received divisions of Coins, weights, and measures; a disquisition on cubes and squares, and a new and easy way for extracting roots; all illustrated by appropriate examples.' ("Life of Swedenborg," p. 9.) As Swedenborg devised for his "octonary computus," both a set of characters and of new names, we were exceedingly anxious to have enriched this report with their representation. We have failed, however, to find any clue to these early publications in any of the public libraries or private collections to which we have had access. The only additional reference to the subject in the volume above referred to is contained in a letter from Swedenborg to M. Nordberg, written after the death of Charles XII, which appears to detail the monarch's first conception of a project of a reformation in the popular system of numeration. An extract, giving all that relates to the subject of octonary computation, is here copied:

Letter of M. Swedenborg, Assessor of the Board of Mines, to M. Nordborg, Author of the History of Charles XII.

"SIR: As you are now actually engaged on the life of Charles XII, I avail myself of the opportunity to give you some information concerning that monarch which is perhaps new to you, and worthy of being transmitted to posterity. * * Conversing one day with the king upon arithmetic, and the mode of counting, he observed that almost all nations, upon reaching 10, began again; and those figures which occupy the first place never change their value, while those in the second place are multiplied ten-fold, and so on with the others; to which we added that men had apparently begun by counting their fingers, and that this method was still practiced by the people; that arithmetic having been formed into a science, figures had been invented, which were of the utmost service; and, nevertheless, that the ancient mode of counting had always been retained, in beginning again after arriving at 10, and which is observed by putting each figure in its proper place.

The king was of the opinion that had such not been the origin of our mode of counting, a much better and more geometrical method might have been invented, and one which would have been of great utility in calculation, by making choice of some other periodical number than 10. That the number 10 had this great and necessary inconvenience,—that when divided by 2 it could not be reduced to the

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number 1, without entering into fractions. Besides, as it comprehends neither the square, nor the cube, nor the fourth power of any number, many difficulties arise in numerical calculations. Whereas, had the periodical number been 8, or 16, a great facility would have resulted, the first being a cube number of which the root is 2, and the second a square number of which the root is 4 ; and that these numbers being divided by 2, their primitive, the number 1 would be obtained, which would be highly useful in regard to money and measures, by avoiding a quantity of fractions. The king, after speaking at length on the subject, expressed a desire that we should make a trial with some other number than 10. Having represented to him that this could not be done unless we invented new figures, to which also names different from the ancient ones must be given, as otherwise great confusion would arise, he desired us to prepare an example in point. We chose the number 8, of which the cube root is 2, and which being divided by 2 is reduced to the primitive number 1. We also invented new figures, to which we gave new names, and proceeded according to the ordinary method. After this we applied them to the cubic calculations, as well as to money, and to measures. The essay having been presented to the king he was pleased with it."

The next person who has produced a system on the basis of 16 is John W. Nystrom, in his work "The Tonal System," described in this magazine, Vol. V, p. 77.

AGES OF JACOB'S SONS. I have searched several works to find the ages of the twelve sons of Jacob. I can find only the age of Joseph, 110 years, given in the Bible, Genesis L, 26. Does any book give the ages of the other eleven sons? BEN.

"BEN" will find their ages given in the "Testament of the Twelve Patriarchs," as follows :

Reuben,	. .	125	Dan,	. .	125
Simeon,	. .	120	Naphtali,	. .	132
Levi,	. .	137	Gad,	. .	127
Judah,	. .	119	Asher,	. .	120
Issachar,	. .	120	Benjamin,	. .	120
Zebulon,	. .	114	Joseph (Gen. L, 26),	.	110
		735			734

735+734=1469. Average age, $122\frac{5}{12}$ years.

RAGNARÖK. (Rāg'nā'rök.) [Old Norse *Ragnarökr*, twilight of the gods.] The "last day," the period of the destruction of the universe, when the whole creation, mankind, giants, and gods, are to perish in a shower of fire and blood. Vidar and Vali alone will survive the conflagration, and will reconstruct the universe on an imperishable basis.

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QUOTATIONS IN THE NEW TESTAMENT.—THE GOLDEN RULE. (Vol. IV, p. 340.) You quote the Golden Rule from a translation of the teachings of Confucius, by M. R. K. Wright. What is James Legge's translation of the Golden Rule? What other classical and apocryphal quotations are there in the New Testament? ANDREW.

The Golden Rule as given by James Legge's work, "The Chinese Classics," New York edition, 1887, *Confucian Analects*, Bk. V, chap. XI, is as follows:

"What I do not wish men to do to me, I also wish not to do to men."

There are many other quotations, classical and apocryphal, in the New Testament, some of which are the following:

1. "All things whatsoever ye would that men should do to you, do ye even so to them."—(Matt. VII, 12; Luke VI, 31.) Confucius's *Analects* V, 11; XV, 23.

2. "The Cretians *are* always liars, evil beasts, slow bellies."—(Titus I, 12.) Callimachus's *Hymn to Jupiter*, 8, according to Theodoret; and from Epimenides, according to Jerome, Chrysostom, and Epiphanius.

3. "Let not the sun go down upon your wrath."—(Ephesians IV, 26). Pythagoras's *Symbols*.

4. "Against such there is no law."—(Galatians V, 23.) Aristotle's *Polemics* III, 8.

5. "Evil communications corrupt good manners."—(I Cor. XV, 33.) Menander's *Thais*; from Euripides, according to others.

6. "For we are also his offspring."—(Acts XVI, 28.) Aratus's *Phenomena*, 5; Cleanthes' *Hymn to Jupiter*, 4.

7. "Eye hath not seen, nor ear heard, neither have entered into the heart of man, the things which God hath prepared for them that love him."—(I Cor. II, 9.) "Ascension and Vision of Isaiah." Jerome, *Esaias* LXIV, 4.) (See McC. & S., VIII, p. 1070.)

8. "For the wrath that is come upon them to the uttermost."—(I Thess. II, 16.) "Testament of the Twelve Patriarchs," *Levi* 6.

9. "Awake thou that sleepest, and arise from the dead."—(Eph. V, 14.) "Testament of the Twelve Patrarchs."

10. "Lord, they have killed thy prophets, and digged down thine altars; and I am left alone, and they seek my life."—(Romans "Prophecy of Elias."—(See McC. & S., III, p. 140.) VI, 2)

11. "Behold, the Lord cometh with ten thousand of his saints, to execute judgment upon all, and to convince all that are ungodly among them of all their ungodly deeds which they ungodly committed, and of all their hard *speeches* which ungodly sinners have spoken against him."—(Jude 14-15.) "Prophecy of Enoch" II, 1.

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12. "The Lord rebuke thee."—(Jude 9.) "Assumption of Moses." Fabricius. *Pseudipigraphia* I, 839 847. (See McC. & S., VI, p. 686.)

13. "Neither circumcision availeth anything, nor uncircumcision."—(Gal. VI, 12.) "Assumption of Moses." Fabricius's *Pseudipigraphia*, I, 836. (See McC. &. S. VI, p. 686.)

14. "Was sawn asunder," with a wooden saw. — (Heb. XI, 37.) "Ascension and Vision of Isaiah" I, 9; V, 11; XI, 4. Justin Martyr's *Dialogue* c, *Trypho*, Paris, p. 349. (See McC. & S.,VIII, p. 1069.)

15. "I will open my mouth in parables, I will utter things which have been kept secret."—(Matt. XIII, 35.)

This quotation is not found in the Old Testament, the writer probably quoting from some book now lost.

16. "If I be lifted up from the earth, I will draw all *men* unto me." (John XII, 32.)

This saying is found in the Zoroasterian writings of the ancients without the supplied word "*men*."

Paul is supposed to have been in possession of the lost book of "Jannes and Mambres," from which he received the information relative to Pharaoh's magicians who "withstood Moses" (II Tim. III, 8).

For a full account of these and other quotations, see C. H. Toy's "Quotations in the New Testament"; McClintock & Strong's Cyclopædia, Kitto's, and Calmet's, Dictionaries.

ALMANACS. Sir Richard Phillips' "Million of Facts" says that almanacs were first published in 1491 by Martin Hekus, at Buda, and that the first almanac in England was printed at Oxford in 1673. The same work says, Mr. Wood gathered from it the facts, that 30,000 copies were printed, besides another sheet almanac which sold for twopence each for that same year. On account of the novelty of the title they were all sold. The first printed almanacs were not calculated for one year, but for several years in advance. Their great features were astrological predictions. The oldest almanac, in existence is claimed to be for the year 1491, which was printed at Augsburg, octavo size. It bears neither the name of the writer nor printer. The title-page gives the following description of its contents:

"This small book is divided, as the year is supposed to be, into months. It teaches further when to use food and drink, and when to take physic, according to the nature and influence of the stars: when to bathe, and how to regulate pregnant women who are fruitful: how

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children are to be educated, and how to guard against the plague. It is, therefore, a book of medicine."

The work is written throughout in German rhyme, and is plentifully adorned with rude wood-cuts.

Michael Nostradamus, the celebrated astrologer, wrote an almaanc, in the style of Merlin, in 1556.

The following are some of the early foreign almanacs according to Haydn's "Dictionary of Dates":

John Somer's Calendar,	1380	Moore's Almanac,	1713
One at Lambeth Palace,	1460	Lady's Diary,	1705
First printed one at Buda,	1491	Season on the Seasons,	1735
First printed in England,	1497	Gentlemen's Diary,	1741
Tybalt's Prognostications,	1433	Nautical Almanac, Maskelyne,	1767
Almanac Liégeois,	1636	British Imperial Kalendar,	1809
Lilly's Ephemeris,	1644	Hone's Every-Day Book,	1826
Poor Robin's Almanac,	1652	Brit. Almanac and Companion,	1828
British Merlin,	1658	Anniversary Calendar, Kidd,	1832
Edinburgh Almanac,	1683	Book of Almanacs, DeMorgan,	1851
Connaissance des Temps,	1689	Chambers' Book of Days,	1862–63

—o—o—

TRAGEDY. That of Alcestis was first represented by Thespis, the first tragic poet at Athens, 536 B. C. Prizes were instituted and the first one gained by Æschylus, 486 B. C. Another prize carried off by Sophocles, 470 B. C. Another won by Euripedes, 442 B. C. Also, another by Astydamus, 377 B. C.—*Arundelian Marbles.*

VENISON FEAST. At a venison feast, Sir Joshua Reynolds addressed his conversation to one of the company who sat next to him, but, to his great surprise, could not get a single word in answer, until at length his silent neighbor, turning to him, said, "Joshua, whenever you are at a venison feast, I advise you not to speak during dinner time, as in endeavoring to answer your question, I have just swallowed a fine piece of fat without tasting its flavor."

CHINESE MODE OF FISHING. The following ingenious mode of taking fish is said to be practised by the Chinese. A flat board, painted white, is fixed to the side of a boat, at an angle of about 45 degrees, the edge inclining towards the water. On moonlight nights the boat is so placed that the painted board is turned to the moon, and the rays of light striking on the whitened surface, give it the appearance of moving water, so that the fish are tempted to leap on it, as on their own element, when the boatman, raising the board with a string, turns the fish into the boat.

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Problems and Answers.

Archimedes is said to have calculated the number of grains of sand contained in the *Cosmos* — the sphere of which the earth is the center, and its radius the distance of the sun. How did he calculate the number, and what answer did he obtain? LEON.

Col. T. Perronet Thompson, author of the work, "Geometry without Axioms," has condensed from the "Arenarius" of Archimedes, the method which that philosopher adopted for his arithmetical computations. He takes "a myriad of myriads," or 100,000,000, and uses it precisely as Locke does *million*. Archimedes calls 100,000,000 *monàs deutéron àrithmon* (the unit of the second class), and then takes of these units 100,000,000; this he call *monas triton àrithmon* (the unit of the third class), and so on. He assumes the diameter of a poppy-seed to be the 40th part of an inch, and then calculates that a sphere of an inch in diameter must contain 6 myriads (60,000) and 4 thousand (4,000), or 64,000 of these seeds. He then assumes that a myriad grains (10,000) of sand are equal in dimension to one poppy-seed, and then proceeds to calculate how many must be in his sphere of 3,000,000 stadia in circumference. He finally made the number to be 1,000 myriads of a myriad of myriads to the 8th power, or

1000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000.

The power of the Greek notation, as exhibited by the letters of the alphabet, were limited to the amount of 9999; but their numerical word *myrias* (myriad), which they represent by M, or *Mu*, augmented the means of notation ten thousand-fold, and enabled them to record by symbols the sum of 99999999. But Archimedes, whose grasp of mind and notion of numbers, was not to be satisfied by calculations so limited as eight places of figures, and he insisted that the numbers of the "sands which *is* upon the sea-shore" were not infinite, but that they were within the power of language. Starting from the point at which arithmetic had reached, he made a myriad myriads the new point of departure, or unit for secondary numbers, and this secondary unit another point for numbers of a third and fourth, and so up to the eighth progression, each added step of progression being represented by eight figures. He then shows that eight of these progressions, or 64 places of figures, would exceed the number of sands which would

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be contained in what he called the *Cosmos*, or the sphere of which the earth is the center, and its radius the sun's distance.

"Pretry girl, with tremulous eyes, if thou knowest the correct method of inversion, tell me what is the number, which multiplied by 3, and added to $\frac{3}{4}$ of the product, and divided by 7, and reduced by subtraction of $\frac{1}{8}$ part of the quotient, and then multiplied into itself, and having 52 subtracted from the product, and the square root of the remainder extracted, and 8 added, and the sum divided by ten, yields 2."
(Vol. VI, p. 251.) —*Colebrooke*, p. 21.

To a question so complicated we will not keep back the solution.

Statement — Multiplier 3; additive, $\frac{3}{4}$; divisor, 7; subtractive, $\frac{1}{8}$; square, —; subtractive, 52; square root, —; additive, 8; divisor, 10: given number, 2.

All the operations are reversed. Proceeding as directed: The known number 2, multiplied by the divisor 10 gives 20; subtract the additive 8 leaves 12; squaring this for the square root which is 144; add the subtractive 52 gives 196; extract the square root for the squaring gives 14; added to its half 7 gives 21; multiplied by the divisor 7 gives 147; take $\frac{4}{7}$ of this multiplicand, which is the same as $\frac{1}{4}+\frac{3}{4}$ additive, give 84; divided by the multiplier 3 gives 28 which is the number sought, and probably the age of the "pretty girl."

WAX FIGURES have their origin in a period before historical times, and wax works are still quite popular in England. The Romans made portraits out of wax, and in the middle ages many of the images of saints were of the same material.

TEA IN SCOTLAND appears to have been known a century later than in England. Sir Walter Scott used to relates, that people were living who recollected how Lady Pumphraston, to whom a pound of fine, green tea had been sent, a rare and valuable present, boiled the same and served it up with melted butter, as condiment to a salted rump of beef; and complained that no cooking she could contrive "would make these *foreign greens* tender."

"LAUNDERED"— THE CORRECT WORD. A correspondent is informed that *laundered*, not *laundried*, is the correct form of the past tense and past participle of the verb *launder*. Were there a verb *to laundry*, the formation of *laundried* might be proper enough. But there is no such verb. Launder holds the field as the verb, according to Webster, and must control. There is a noun launder, from which the verb launder, and the noun laundry, appear to be derived.—*Baltimore Sun.*

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STARS OF THE FIRST MAGNITUDE. How many stars are their of the first magnitude, and what are their names? JONATHAN.

There are 23 stars of the first magnitude as given by Burritt in his "Geography of the Heavens":

Name.	Constellation.	Name.	Constellation.
Achenar	Eridanus,	Capella,	Perseus,
Acrux,	Crux Australis,	Denebola,	Leo.
Agena,	Centaurus,	Formalhaut,	Piscis Australis,
Aldebaran,	Taurus,	Lyra,	Lyra,
Altair,	Aquilla,	Miaplacidus,	Argo Navis.
Antares,	Scorpio,	Pollux,	Gemini,
Arcturus,	Bootes,	Procyon,	Canis Minor,
Arided,	Cygnus,	Regulus,	Leo,
Benetnasch,	Ursa Major,	Rigel,	Orion,
Bete lguese,	Orion,	Sirius,	Canis Major,
Bungula,	Centaurus,	Spica,	Virgo.
Canopus,	Argo Navis,		

Some other astronomers classify some of these as of the second magnitude. We also add here other interesting information relative to the stars, location, names, etc.

The Nine Nautical Stars are conspicuous stars lying along the moon's path which are used by nautical men for determining their longitude at sea:

1.	Arietis in	Aries,	6.	Antares in	Scorpio,
2.	Aldebaran,	Taurus,	7.	Altair,	Aquilla,
3.	Pollux,	Gemini,	8.	Formalhaut,	Piscis Aus.,
4.	Regulus,	Leo,	9.	Markab,	Pegasus.
5.	Spica,	Virgo,			

The Great Dipper is formed by seven bright stars in Ursa Major: Benetnasch, Mizar, Alioth, Megrez, Phad, Merak, and Dubhe.

Also called The Northern Car, The Plough, Charles's Wain, etc.

The Two Pointers are Merak and Dubhe, the last two in the bowl of the Dipper, so called because they *point* to the north polar star.

The Little Dipper is formed by *seven* stars in Ursa Minor, and is in similar position in the constellation. *Gamma* and Kochab, in the end of the bowl, are called the *Guards*, because they seem to guard the bear in his march around the pole.

The Square of Pegasus is formed by four stars: Algenib, Markab, Scheat, and Alpheratz (in Andromeda).

The Pleiades or *Seven Stars* are in Taurus: Alcyone, Celeno, Electra, Maia, Merope, Sterope, and Taygeta. Anthon gives the first name Halcyone. Lempriere gives the sixth name as Asterope.

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The Hyades are seven stars in Taurus: Ambrosia, Cyrane, Eudoxa, Pasithæ, Plexauris, Psyche, and Pytho. Lempriere gives their names as Ambrosia, Coronis, Eudora, Phaola, Polyxo, Prodice, and Thione. Anthon gives names six from Pherecydes: Æsuia, Ambrosia, Dione, Coronis, Eudora, and Polyxo. Hesiod gives five names: Cleea, Coronis, Eudora, Phæo, and Phæsula.

The Equinoctial Stars were formerly Aldebaran in Taurus, and Antares in Scorpio.

The Solstitial Stars were formerly Regulus in Leo, and Formalhaut in Piscis Australis.

The Three Guides are the stars Algenib in Pegasus, Alpheratz in Andromeda, and Caph in Cassiopeia, so called, because they each lie in the equinoctial colure.

The Girdle of Andromeda is formed by Merach, *Mu* and *Nu*.

The Three Kings are Alnitak, Anilam, and Mintaka, in Orion. Severel appellations are given to these stars:

"Bands of Orion" (Job 38: 31),	The Golden Girdle,
Jacob's Rod (Gen. xxx, 37).	The Lady's Elwand,
Napoleon,	The Rake,
Orion's Belt,	The Three Stars,
The Buckler,	The Yard Stick,
The Ell and Yard,	The Three Kings.

The Epaulets of Orion are Betelguese and Bellatrix.

The Egyptian X is formed by five stars. The upper two are Procyon in Canis Minor, and Betelguese in Orion; the lower two are Naos in Argo Navis, and Phaet in Corvus; while the central star is Sirius in Canis Major.

Various fanciful names are applied to many stars, some from their location, and some from their significance:

Aldebaran,	The Bull's Eye.	Capella,	The Little Goat.
Antares,	The Scorpion's Heart.	Denebola,	The Lion's Tail.
Alphard,	The Dragon's Heart.	Mira,	Wonderful Star of 1596
Alruccabah, Cynosura,	The Pole Star.	Regulus,	The Lion's Heart.
		Sirius,	The Dog Star.
Altair,	The Eagle's Heart.	Spica,	The Virgin's Spike.
Arcturus,	The Bear's Tail.	Thuban,	The Dragon's Tail.

The names of the eight satellites of Saturn are Dione, Enceladus, Hyperion, Japetus, Mimas, Rhea, Tethys, and Titan.

The names of four of the six satellites of Uranus are Ariel, Oberon, Titania, Umbriel.

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QUESTIONS.

1. How did the author of "Planetary and Stellar Worlds" spell his own name? My copy has one *l* in it (*Mitchel*), while I have observed in articles in reference to him, since the war, his name is spelt with two *l*'s (*Mitchell.*) A. H.

2. Are the floods known as Noah's, Ducalion's, and the Atlantean deluges, considered to be one and the same? HENRY.

3. I observe that the articles on the Phœnix in the current volume (pp. 248, 253), give the years of its periodical life differently. Clement's account gives it 500 years (*I Corinthians* XII, 5); Herodotus, 500 years (*Euterpe* LXIII); Kenealy, 600 years (*Book of God*, pp. 172, 193, 256); Lactantius, 1,000 years (*Ante-Nicene Library*, XXII p. 216.) How are the accounts reconciled? MYSTIC.

4. What is the god known in mythology as *Cwenila?* X.

5. What is the meaning of *right* as used to designate the *right*-hand? ELPIS.

5. What are the mystical names of the 24 rounds of Jacob's Ladder (Gen. 28, 12). (See Sermon, Manchester, N. H., *Daily Union*, Dec. 31, 1888.) AUDITOR.

6. What was the rank of the Jewish titles, *Rabban*, *Rabbi*, *Rabboni.* (Matt. XXIII, 7; John XX, 16.) SEARCHER.

7. Why was the name of *Luxor* ("more light") given to the city of ancient Thebes? ISAAC T. POLKHORN.

8. In the current volume you give us the Indian word from Eliot's Indian Bible for "kneeling down to him." Please give us the English of these Indian words quoted from their religious books:

(*a*) "MOOIGNIAZIMOONGO."
(*b*) "TLAZATZINTILIZTLATLACOLLI."
(*c*) "SCHIWELENDAMOWITCHEWAGAN." READER.

9. What is said to be the Marquis of Worcester's Century of Inventions? J. J. J.

10. Who is on record as having the loudest voice, or as being heard the farthest away. BEN.

11. Why did Isaiah Thomas, in his series of Almanacs, date them
"Of the Independence of America," to 1791;
"Of the Independence of United America," to 1796;
"Of the Independence of United Columbia," to 1799;
"Of the Columbian Independence," afterwards? JOHN.

12. In Lilly's Almanac for 1654, for the month of August, is printed the following line. To whom does the line refer? Z.

Hoc in tumbo, jacet presbyter et nebulo,
"Here in this tomb lies a presbyter and a knave."

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

"*He who knows himself knows his own Creator.*"—HADEES.

VOL. VI. MAY, 1889. No. 5.

The Cubical Stone in King Solomon's Temple.

At the building of the Temple in Jerusalem, an unexpected and afflicting event occurred, which threw the Masons engaged in the work into the greatest consternation and confusion. The G. M., H. A. B., had sent to certain F. Cs. 13 stones, and directed that with these they should complete a small *square* near the capestone, that being the only portion of the fabric which remained unfinished. Every stone of the Temple was formed into a *square* containing 5 *equilateral triangles*, each being equal to a cube, lineally, and each side of the triangles being equal to a *plumb-line*. The space, therefore, which remained to be completed, was the last triangle of the last stone, and equal to the $\frac{1}{8}$ part of the plumb-line, or $\frac{1}{8}$ of the circle, and $\frac{1}{16}$ of the triangle, which number is 26, or the Great Name of the Almighty in Hebrew. The 13 stones consisted of all the fragments which remained from the building, and comprised two *cubes* in two divisions. In the first division was contained one cube in an entire piece, and in the second a cube in 12 pieces, namely, $4\frac{1}{2}$ parts in one piece, 2 parts in 4 pieces, 1 part in 1 piece, and $\frac{1}{2}$ a part in 6 pieces; total 13 pieces. The F. Cs. perceiving that they could finish the square with the fragments in the second cube, *rejected* the first, observing that the exterior of the stone was marked with certain lines, namely, an equilateral triangle bisected, 3 lines: one side of the cube being the base; 2 squares diagonally bisected, and each having a perpendicular line to the center, 6 lines; 2 straight lines at right angles; and a square diagonally bisected, 2 lines; total 13 *lines*, or 5 surfaces of the cube. Seeing these lines, the Masons thought the stone was split, and therefore useless. It was then thrown aside, and one of their number in contempt struck the cube a violent blow with a wooden mallet (no

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tool of iron having been allowed in the building of the Temple); the cube instantly divided into 12 parts, the 2d of which bore the same relation to the 1st that the 3d did to the 2d, and the 4th to the 3d; this being the arithmetical progression of 1, 2, 3, 4. The parts were $\frac{1}{4}$ of the cube in one piece; $\frac{1}{4}$ of the cube divided into $\frac{1}{8}$, and $\frac{1}{16}$; $\frac{1}{4}$ of the cube divided into 2 hexahedrons, and 2 triangles equal to one hexahedron; and $\frac{1}{4}$ of the cube divided into 4 pentahedrons. Upon the 4 pieces they discovered a number of hieroglyphics, which, to those Masons who could read them, proved that these characters were in the hand-writing of the G. M. himself, coupled with an inscription to the following effect:

The Great Problem—Required, to construct the Temple, Roof, Pinnacles, Porch, Step, and Door, from $\frac{1}{4}$ of a cube: to consist of 12 parts, each part to bear a proportional relation to the cube, the Temple, and to each other.

Required, from $\frac{1}{8}$ of a cube, and $\frac{1}{16}$ of a cube, to construct the Porch of Pillars, the Lintel, and posterior Pillars of the Temple.

Required from $\frac{1}{4}$ of the cube in $\frac{3}{6}$ to construct the rests for the Wall, the Pillars, the Bases, and the Steps.

Required, from $\frac{1}{4}$ of a cube in $\frac{4}{6}$ to construct the foundation of the Temple, the entire fabric to contain 36 parts or the square of the hexahedron.

Required, to construct, from 2 cubes of the same dimensions, the outer and inner Court, and the Porch of Judgment; the inner Court to be double the area of the foundation, and to consist of an octagon formed into a square, containing 12 parts; the outer Court to be double the area of the inner Court, and to consist of 12 parts, each a square; and the Porch of Judgment to be equal to $\frac{1}{12}$ of the outer Court, and to consist of 4 parts, each a triangle, the whole comprising 64 parts, or the square of the cube.

These pieces to be constructed separately in the quarries, and to be packed in 3 cubes of equal dimensions, the first containing 36 pieces, the second 8 pieces, and the third 20 pieces; that is, a square, a cube, and $\frac{4}{5}$ of a square.

The Throne is a separate piece, to be taken from the interior of the Temple cube, and to consist of $\frac{1}{6}$ of $\frac{1}{4}$ of a cube, making in all 65 pieces, which number in the Hebrew means the *Great Secret.*

The F. Cs. carried the broken cube to H. K. of I., who in conjunction with H. K. of T., directed that they should be placed along with the jewels of the craft, on a cubic stone, encrusted with gold, in the center of a deep cavern, within the foundations of the Temple, and further ordered, that the door of this Mysterious Court should be built up with large stones, in order that no one in future should be able to gain admission into this mysterious apartment. At the *re-*

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building of the Temple, however, three F. Cs., lately returned from Babylon, in the course of their labors inadvertently stumbled upon this mysterious recess. They discovered the fractured cube, and carried the pieces to Z., J., and H., who recognized in the 4 pieces the ****, and accordingly advanced the F. Cs. to a new degree in Masonry, for having accomplished this discovery. But the *problem* they were unable to solve, or to re-construct the broken cube ; and, in consequence, they declared that a profound mystery involved the whole transaction, which would doubtless some day be revealed to the world. Since that time, the cube had remained fractured, and had continued in that state until the month of October, 1835, when it was re-constructed, and the Temple re-built by Robert Tytler, M. D., Surgeon of 34th Regiment R. I, at Midnapoor, Bengal. The problem is from an attentive investigation of the properties of the Magnetic Angle dividing a cube of the Universe. His work, when completed, corresponded precisely with the construction of that edifice as described in the book I Kings VI and VII.

1. The center of the power is the cosine of 30°.
2. The force is the chord of 60°
3. The angle is 45°.
4. The field of operation is from 45° to 90°.
5. The apex of the beam above the angle of the roof is the completion of the angle, or Magnetic Point.

Jehovah in Hebrew is *J* 10, *H* 5, *V* 6, *H* 5 = 26. This is the magnetic measurement, and corresponds to a hair's breadth with the Biblical measure ; and 2×2×2=8, is the cube, and plumb-line.

The Israelitish measurement was therefore a cube, and divided into 8 cubes, and the length of each divided into 40 cubits, or the four letters of the Name, × 10 (the first letter).

J 10, *E* 8, *S* 200, *O* 70, *U* 400, *S* 200 = 888.

The number of the Name of *Jesous* (the Name in Greek) is therefore 888, or 8, 8, 8, three cubes.

Mr. Tytler has further ascertained that this is the anatomy of the brain. When the brain is spread out it is the Temple. When the Temple is wrapped within the sphere, or formed into a globe, it is the brain, or Universe.

For further speculations upon this subject and its analogical bearings, we refer the reader to the works of Kenneth R. H. Mackenzie, whose pseudonym was " Cryptonymus," now deceased.

OPERA OF " ERMINIE." (Vol. V. p. 284.) This opera is founded upon Daumier's " L'Auberge des Adrets," known to the English stage as " Tobert Macaire." R.

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Geomantic Figure on Lord Beaconsfield.

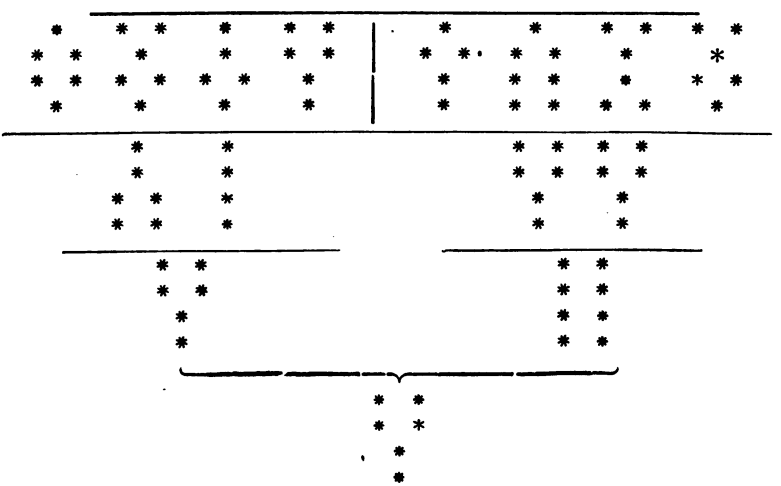
Edwards Pierrepont, in an article in the *North American Review* for December, 1888, on "Lord Beaconsfield and the Irish Question," takes the following geomantic figure and "judgment "from the biography of Bulwer-Lytton, by his son Lord Lytton—the present ambassador to France.

"Throughout the greater part of Disraeli's early career, his true character was very imperfectly perceived, and the real solidity of his intellect greatly underrated. My father's early recognition of his rare gifts was never for a moment obscured by the ridicule with which mediocre men, for many years, were accustomed to speak of the political pretensions of the future Premier, as if he were merely a spouting charlatan. But neither did his opinion of the quality and order of his friend's genius equal the public estimation of them at the close of that unique career which my father did not live to see.

What he did not see, however, he foresaw. His well-known interest in studies of an occult and mystical description, which will fill a chapter in the story of his later life, led him for many years to find amusement in the process of divination called 'geomancy.' And at Wildbad, in 1860, he cast and interpreted the subjoined Geomantic Figure of the character and career of Benjamin Disraeli:

'GEOMANTIC FIGURE.

B. DISRAELI.



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Judex.

A singularly fortunate figure. A strongly marked influence toward the acquisition of coveted objects.

He would gain largely by marriage in the pecuniary sense, which makes a crisis in his life. He would have a peaceful hearth, to his own taste, leaving him free for ambitious objects.

In honors, he has not only luck, but a felicity far beyond the most favorable prospects that could be reasonably anticipated from his past career, his present position, or his personal endowments.

He will leave a higher name than I should say his intellect quite warrants, or than would now be conjectured. He will certainly have *very high* honors. Whether official or in rank, high as compared with his birth or actual achievements.

He has a temperament that finds pleasure in what belongs to social life. He has not the reserve common to literary men.

He has considerable veneration, and will keep well with Church and State. Not merely from policy, but from sentiment and instinct.

His illnesses will be few and quick. But his last illness may be lingering. He is likely to live to old age—the close of his career much honored.

He will be, to the last, largely before the public. Much feared by his opponents, but greatly beloved, not only by those immediately about him, but by large numbers of persons to whom he is personally unknown. He will die, whether in or out of office, in an exceptionally high position, greatly lamented, and surrounded to the end by all the magnificent planetary influences of a propitious Jupiter.

No figure I have drawn more surprises me than this. It is so completely opposed to what I myself should have argued, not only fro the rest of his career, but from my knowledge of the man.

He will bequeath a repute out of all proportion to the opinion now entertained of his intellect, even by those who think most highly of it

Greater honors far than he has yet acquired are in store for him His enemies, though active, are not persevering. His official friends though not ardent, will yet minister to his success. E. L. B.

Though specious in theory, nothing can be falser in fact than the common saying that all the world is wiser than any man in it, if by this it be meant that the voice of the multitude is nearer the truth than the judgment of the sage. The popular estimate of eminent men is, in the majority of cases, the extravagant offspring of hearsay, which gathers force by repetition. When once the cry is taken up, the cuckoo-note, as it passes from mouth to mouth, assumes a sort of collective magnitude. Exaggeration is its necessary ailment. In the hasty correction of an erroneous belief, one extreme is succeeded by another, and perhaps we may rightly ascribe to this cause the fact

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that my father's opinion was a mean between the earliest and latest popular estimate of his friend's character; so that he, who asserted the genius of Disraeli when it was depreciated, was surprised at the glories revealed by this Geomantic Figure.

But whatever may be the truth in this particular, the singularity is the same—that the geomantic conclusions were not suggested by my father's views, but in glaring opposition to them.

The event, which verified his divination, contradicted his judgment."

DEFINITIONS OF GOD. The following sublime definitions of God are found in the Hindû *Vedas*:

" He who surpasses speech, and through the power of whom speech is expressed, know, O thou! that He is BRAHMA, and not these perishable things that man adores."

" He who cannot be comprehended by intelligence, and he alone, say the sages, through the power of whom the nature of intelligence can be understood, know, O thou! that He is BRAHMA, and not these perishable things that man adores."

" He who cannot be seen by the organs of vision, and through the power of whom the organ of seeing sees, know, O thou! that He is BRAHMA, and not these perishable things that man adores."

" He who cannot be heard by the organ of audition, and through the power of whom the organs hearing hears, know, O thou! that He is BRAHMA, and not these perishable things that man adores."

" He who cannot be perceived by the organ of scent, and through the power of whom the organ of smelling smells, know, O thou! that He is BRAHMA, and not these perishable things that man adores."

JEWISH TITLES. (Vol. VI. p. 284.) John Kitto says (Cyclopædia Vol. II, p. 596) that there is no exact equivalent in the English language answering to the word Rabbi; but in purport and usage it is near to *doctor* or *master*: or combining both these signification, would fairly represent it. The actual signification of *Rab* in Hebrew is " a great one," that is a chief, or master, and would as a title be probably represented by " Excellenza " of southern Europe, which is as common as Rabbi among the Jews. This title was employed in the Jewish schools in a three-fold form, indicating as many degreest but in a stricter sense than the academical degrees of Bachelor Master, and Doctor. The lowest of these degrees of honor was *Rab* Master; *Rabbi*, Mo Master; *Rabban*, Great Master and with thd ffix *Rabboni*, My Gr eat Master" John xx, 16.)

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BABBAGE'S CALCULATING MACHINE. (Vol. VI, p. 268.) The answer to this question can best be given in Babbage's own words taken from his "Ninth Bridgewater Treatise," pp. 43-48, Philadelphia edition, 1841. After giving a description of the calculating engine and his services to the English Government, and delays in its perfection, he says

"Let the figures thus seen be the series of natural numbers, 1, 2, 3. 4, 5, 6, &c., each of which exceeds its immediate antecedent by unity. Now, reader, let me ask how long you will have counted before you are firmly convinced that the engine, supposing its adjustments remain unaltered, will continue whilst its motion is maintained, to produce the same series of natural numbers? Some minds perhaps are so constituted, that after passing the first 100 terms, they will be satisfied that they are acquainted with the law. After seeing 500 terms, few will doubt; and after the 50,000th term, the propensity to believe that the succeeding term will be 50,001, will be almost irresistible. That term *will* be 50,001; the 5,000,000th and the 50,000,000th term will still appear in their expected order; and one unbroken chain of natural numbers will pass before your eyes, from 1 up to 100,000,000

True to the vast induction which has been made, the next succeeding term will be 100,0000,001; but after that the next number presented by the rim of the wheel, instead of beeing 100,000,002, is 100,010,002. The whole series from commencement being thus:

	1
	2
	3
	4
	* * *
	* * * * * * *
	99,999,999
	100,000,000
Regularly as far as . .	100,000,001
	100,010,002 the law changes.
	100,030,003
	100,060,004
	100,100,005
	100,150,006
	100,210,007
	100,280,008
	100,360,009
	100,450,010
	100,550,100
	* * * * * * *

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The law which *seemed* at first to govern this series at 100,000,002nd term failed. That term is larger than we expected by 10,000. The next term is larger than was anticipated by 30,000, and the excess of each term, above what we expected, forms the following table ;

10,000
30,000
60,000
100,000
150,000
* * * * *

being, in fact, the series of *triangular numbers*, each multiplied by 10,000. The numbers 1, 3, 6, 10, 15, 21, 28, &c., are formed by adding the successive terms of the series of natural numbers, thus :

$$1 = 1$$
$$1 + 2 = 3$$
$$1 + 2 + 3 = 6$$
$$1 + 2 + 3 + 4 = 10, \text{ \&c.}$$

They are called triangular numbers, because a number of points corresponding to any term can always be placed to form a triangle.

If we continue to observe, we shall discover another law then coming into action, which also is dependent, but in a different manner, on triangular numbers. This will continue through about 1430 terms, when a new law is again introduced, which extends over about 950 terms ; and this, too, like all its predecessors, fails, and gives place to other laws, which appear at different intervals.

Now it must be remarked, that the law that each number presented by the engine is greater by unity than the preceding number, which law the observer had deduced from an induction of 100,000,000 instances, was not the true law that regulated its action ; and that the occurrence of the number 100,010,002 at the 100,000,002d term, was as necessary a consequence of the original adjustment, and might have been as fully foreknown at the commencement, as was the regular succession of any one of the intermediate numbers to its immediate antecedent. The same remark applies to the next apparent deviation of the new law, which was founded on an induction of 2761 terms, and to all the succeeding laws ; with this limitation only, that whilst their consecutive introduction at various definite intervals is a necessary consequence of the mechanical structure of the engine, our knowledge of analysis does not yet enable us to predict the periods at which the more distant laws will be introduced. * *

The engine we have been considering is but a very small portion (about 15 figures) of a much larger one, which was preparing, and is partly executed ; it was intended, when completed, that it should have

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presented at once to the eye about 130 figures. In that more extended form which recent simplifications have enabled me to give to machinery constructed for the purpose of making calculations, it will be possible, by certain adjustments, to set the engine so that it shall produce the series of natural numbers in regular order, from unity up to a number expressed by over 1,000 places of figures. At the end of that term, another and different law shall regulate the succeeding terms; this law shall continue in operation perhaps for a number of terms, expressed perhaps by unity, followed by 1,000 zeros, or 10^{1000};* at which period a third law shall be introduced, and like its predecessors, govern the figures produced by the engine during a third of those enormous periods. This change of laws might continue without limit. Each individual law being destined to govern for millions of ages the calculations of the engine, and then give way to its successor to pursue a like career.

It has been supposed that ten turns of the handle of the calculating engine might be made in a minute, or about 526,000,000 in a century. As in this case, each turn would make a calculation, after a million of centuries, and only the 15th place of figures would have then been reached."

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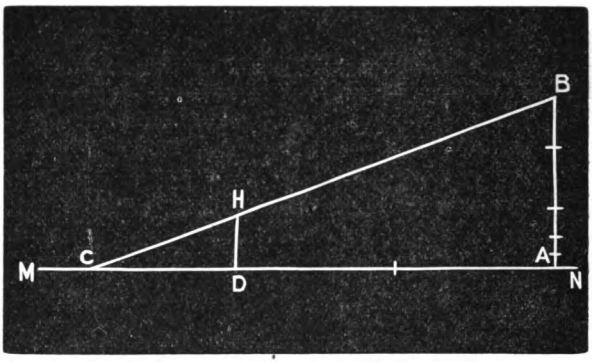
* [1000000000

Geometrical Construction for the Circumference of a Circle.



From any point A, in an indefinite straight line $A\ C$, draw a perpendicular $A\ B$ equal to the given diameter. Then set off $A\ C$ equal to three times $A\ B$. Join $B\ C$, and from D, a point in the line $A\ C$, equal to twice $A\ B$, draw the perpendicular $D\ H$. Make $D\ M$ equal to $H\ C$, and $A\ N$ equal to $\frac{1}{8}$ of $\frac{7}{10}$ of $A\ B$.

Then $N\ M$ is nearly equal to the circumference of a circle, whose diameter is $A\ B$. Because,

By construction, $A\ N = \frac{1}{8}$ of $\frac{7}{10}$ of $A\ B$

$$A\ D = 2\ A\ B$$

$$D\ M = H\ C = \tfrac{1}{8}\sqrt{(A\ B^2 + A\ C^2)} = \tfrac{1}{8}\ B\ C$$

If $A\ B = 1$; then $\frac{1}{8}$ of $\frac{7}{10} + 2 + \frac{1}{8}\sqrt{10} = \pi = 3.141592+$, correct to the sixth decimal place. T. P. Stowell.

Curious Properties of 2.61803399+ (Vol. V, p. 206.) I will add a few more curious properties to those already given of the number 2.61803399+

The reciprocal of .61803399+ is 1.61803399+

If a series of fractions be made thus, $\frac{2}{3}$, $\frac{3}{5}$, $\frac{5}{8}$, $\frac{8}{13}$, $\frac{13}{21}$, $\frac{21}{34}$, $\frac{34}{55}$, etc., in which every numerator equals the preceding denominator, and each denominator equals the sum of the preceding numerator and denominator, then the farther we proceed with the series the nearer the fractions become to equal .61803399+ They are alternately a little greater and a little less; but the difference grows less at each successive step.

The cosine of the angle that the sides of the Great Pyramid make with the plane of the base is .61803399+

T. S. Barrett.

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Questions and Answers.

—o—o—

TRANSLATION OF PROVERBS XXII, 6. (Vol. V. p. 78.) Is this

"*Train up a child in the way he should go,*"

or "*Enoch hath been made into a boy, according to his path.*"

FIDES.

Proverbs XXII, 6, reads in Hebrew thus: HHaNouCH L'NaGHaR GHaL PeeI DaRCHVou, GaM CHeeI IaZKeeIN LouA IoSVooR MeeMMeNoH. The literal meaning of which is:

"Initiate a youth after the manner of his way, (then) also if he gets to be old he will not deviate from it."

The proposed rendering is impossible; because, (1st), the second part of the verse would not suit to it at all; (2d), there is no verb in this passage to be rendered "hath been made"; (3d), therefore, HHaNouCH must be a verb, and not a noun; and (4th), the L in the word L'NaGHaR does not mean always "to," "into," representing the dative case, but is frequently the sign letter for the accusative (=objective) case, and here is the objective case, NaGHaR, after the verb HHaNouCH.

The reading of the English Common Version is insipid. Thousands of youths have been trained the way they should go, *i. e.* aright yet when they became old they left it. The author evidently inveighs against the ready-made, wholesale education of the schools, and he would rather have a youth educated according to *his individual capacity* into knowledge and wisdom, then he would not turn from them when he becomes older, and thinks for himself.

The HHaNVouCH (English "Enoch") of Genesis v, 18, 19, 20 21, 22, 23, and 24, was very likely an initiate into divine wisdom His grandfather was M'HaLeL-AeL, = "Praiser of God," but his father was IeReD = "a goer down," "an indifferent," or "apostate," and the traditional divine wisdom threatened to become extinct with him. But HHaNVouCH, his son, became initiated, and begat his longest-lived son, whose name was MTHooVIHeLaHH, which I would render "Marking-Sender," *i. e.* one who disseminated certain marks and signs, and it may be he who taught Noah the science of geometry, without which he could not have built the ark. In that ark I have shown* from Genesis VI, 16, how in it was involved the knowledge of the

* "The Measures and Weights mentioned in the Bible, in connection with Structures, Worship and Narratives."—*International Standard*, Vol. III, No. 2, pp. 101-100, 1885.

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47th problem of Euclid ; and with this ($a^2+b^2=c^2$) is connected a great deal of divine wisdom, since the out-measuring of the circle, the infinite, is only possible at all by the equilateral triangle, and this triangle only by its half, namely, the rectangular triangle. The divine constructive hypothenuse is manifest to the mind by two *un*equal lines, the first of which in numbers are 3^2+4^2, which are the *un*equal parts of 5^2. E. M. EPSTEIN, M. D.

—o——o—

LARGEST NEWSPAPER EVER PRINTED IN THE UNITED STATES. (Vol. VI, p. 268.) The largest newspaper, to our knowledge, ever published in this country was *The Illuminated Quadruple Constellation*, a leviathan paper, filled with every variety of useful and entertaining reading for the million. New York, July 4, 1859. Edition 28,000. Price 50 cents a copy. George Roberts, publisher. The mastodon of newspapers, published once in 100 years. Size, 70 x 100 inches, or almost 49 square feet; an 8-page sheet ; 104 columns, or 13 to each page ; length of column, 48 inches, or 4 feet ; illustrated with good portraits of President James Buchanan, Edward Everett, Henry, Ward Beecher, Nathaniel P. Banks, Edwin H. Chapin, Horace Greeley, Elizabeth Barret Browning, Alexander Von Humbolt, James Gordon Bennett, and several others. The sheet contains 36 different poems entire, among them is "Braddock Defeat ; or the Battle of Monongahela" ; this poem ccntains 64 eight-line verses, and occupies one column and one-fourth, or 5 feet long. The paper also contains the celebrated "Moon Hoax" entire, taken from the New York *Sun*, 1835 ; historical articles, essays, stories, etc. The weight of the paper required for the edition of 28,000 was equal to that required for over 200,000 copies of the New York *Times* and *Herald*, and cost $60 a ream, each ream weighing 300 pounds. It required 40 persons 8 weeks of labor to set up and publish the edition.

The longest *item* of news ever telegraphed to a newspaper, was the entire New Testament as revised, and all variations of the English and American committees, from New York to Chicago, and the whole published as an item of news in the Sunday morning Chicago *Tribune* for May 22, 1882. That day's *Tribune* comprised 20 pages, 16 of which were required for the New Testament.

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COLLISIONS OF PLANETS. Dr. Olbers put forth the hypothesis that the asteroids were but the fragments of one large planet which by some catastrophe had been broken into planetoids. Has there ever been any calculations made as to the probabilities that a collision could take place? T. B. M.

Prof. O. M. Mitchel says, in his revision of Burrett's "Geography of the Heavens," that if the knowledge of the asteroids was perfect, it would not be impossible to compute backward or forward and ascertain the time when the orbits of any pair of planets intersected each other, and where the planets were at the time of this intersection. Could the intervals between the times of intersection be obtained, and combining these with the periods of the asteroids in their orbits, it would become possible to compute the time when a collision of the planets is to take place. By computations, Encke found that about the year A. D. 3397, the orbit of Ceres would actually cut the orbit of Pallas; but to obtain the position of the planets in their orbits, at the time of intersection, has not been attempted. The hypothesis of Dr. Olbers, from every new asteroid discovered, although the fact that the aphelion of Flora is shorter than the perihelion of Ceres, presents a difficulty which had not before existed.

Up to the time that Prof. Mitchel published these statements, 1849, only 8 of the asteroids had been discovered. At that time the asteroids known were Ceres, Pallas, Juno, Vesta, Astæra, Hebe, Iris, and Flora. The following interior orbits were demonstrated, there being then 10 cases where the orbit is enclosed the one within another:

Flora is within Hebe.
Flora and Iris are within Juno.
Asteæra and Vesta are within Pallas.
Astæra, Elora, Iris, Pallas, and Vesta are within Ceres.

The following asteroids' orbits interlock like the links of a chain:

Pallas and Vesta interlock into Flora.
Ceres, Pallas, and Vesta interlock into Hebe.
Flora, Hebe, Pallas, and Vesta interlock into Iris.
Ceres, Hebe, Pallas, and Vesta interlock into Juno.
Flora, Hebe, Iris, Juno, and Vesta interlock into Astæra.

Now, since 1849, to January 1, 1888, 272 more asteroids have been discovered, or a total of 280 (see Vol. V, pp. 8-13, 206). There must be an intricate number of interlockings of their orbits, and a great probability that sooner or later a collision will occur among them.

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THE PHŒNIX. ITS AGE. (Vol. VI, p. 284.) For the benefit of "MYSTIC" we give a further account of this bird as found in McClintock & Strong's "Cyclopædia," Vol. VIII, p. 164. The precise period of the visit o fthe phœnix was not known at Heliopolis, in Egypt, an was a subject of contention till its appearance. The connection of the phœnix period with that of the Sothiac cycle, appears to be generally received by chronologists. According to Ælian it was a cycle of 500 years; Tacitus seems to make it 250 years; Lepsius makes it 1,500 years. The phœnix is said to have appeared in Egypt 4 times: 1st, under Sesostris; 2d, under Amasis, B. C. 569-525; 3d, under Ptolemy Philadelphus, B. C. 284-246; 4th, just prior to the death of Tiberius, B. C. 36-34. The bird appears upon the coins of Constantine, A. D. 334, or 300 after the death of Jesus, who was considered the phœnix by the monastic writers. The Rabbins claim that the phœnix is twice spoken of in the Scriptures, namely, "I shall die in my nest, I shall multiply *my* days as the sand" (Job XXIX, 18); and, second, "thy youth is renewed like the eagle's" (Ps. III, 5).

The Simorg of the Persians is said to have witnessed 12 catastrophes, and may yet see many more. It has built its nest on Mount Kaf, and perched upon the branches of the Yogard, or tree of life; and it foretells good or evil to mortals. The Jews have their sacred bird, the Tsits; the Arabians, the Rokh; and the Hindûs, Semenda.

BANBURY CROSS. (Vol. V, pp. 180, 206.) Your correspondent is somewhat in error in his reply to this question. The cross was in the market place of the village, and around it the markets were held. In olden times the shows of Robin Hood and Maid Marian were held in the village, but in the reign of Elizabeth, the Puritans, thinking these pageants savored of idolatry, attacked these maskers and mummers, and in the riot that ensued, the high cross, with three smaller ones, was cut down and hacked into pieces. It has of late years been rebuilt. The old nursery rhyme, "Ride a cock-horse to Banbury Cross,' is only a verified chronicle of the old history of the village. R.

STENTORIAN VOICE. (Vol. VI. p. 268.) The loudest-voiced man of whom we have a record, is sung by Homer, *Iliad* Bk. v, l. 786-769:

> "Heaven's empress mingles with the immortal crowd,
> And shouts, in Stentor's sounding voice, aloud;
> Stentor the strong, endued with brazen luugs,
> Whose throat surpassed the force of fifty tongues."

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BALLAD OF "WILD DARRELL." (Vol. V, p. 180.) This ballad is by Sir Walter Scott, and is introduced into "Rokeby." R.

BALLAD OF "WILD DARRELL.

o—o—o—o

"And whither would you lead me, then?"
Quoth the Friar of orders grey;
And the Ruffians twain replied again,
"By a dying woman to pray."—

"I see," he said, "a lovely sight,
A sight bodes little harm,
A lady as a lily bright,
With an infant in her arms."

"Then do thine office, Friar grey,
And see thou shrive her free!
Else shall the sprite, that parts to night,
Fling all its guilt on thee.

"Let mass be said, and trentals read,
When thou'rt to convent gone,
And bid the bell of St. Benedict
Toll out its deepest tone."

The shift is done, the Friar is gone,
Blindfolded as he came—
Next morning, all in Littlecot Hall
Were weeping for their dame.

Wild Darrell is an alter'd man,
The village crones can tell;
He looks pale as day, and strives to pray,
If he hears the convent bell.

If prince or peer cross Darrell's way,
He'll beard him in his pried—
If he meet a Friar of orders grey,
He droops and turns aside. —*Rokeby*, Canto V, XXVII.

—o——o—

CHESS-KNIGHT'S TOUR. (Vol. VI, p. 267.) The following is the solution to LEANDER L. THORNE'S tour.

"Hail Morphy, bloodless victor, hail,
Thou mightier than Napoleon;
His triumphs were the price of blood,
His wars by many generals won,
While thou upon the checquered board,
With never erring certainty,
Alone, unaided leadest on
Thy troops to glorious victory."

PROBLEM. (Vol. VI, p. 236. No 3.) No solution has been received to this problem. We publish the answer, and still await a solution.

How far did the lost spirits fall in nine days, as stated in Milton's "Paradise Lost"? JONAS.

"Nine days they fell."—*Bk.* VI, *line* 861.

"Thence, full of anguish driven,
The space of seven continued nights he rode
With darkness, thrice the equinoctial line
He circled, four times crossed the car of night
From pole to pole, traversing each colure;
On the eighth returned, and on the coast, averse,
From entrance or cherubic watch, by stealth
Found unsuspected sway."—*Bk. XI, lines* 62-69.

Ans. 1,832,308,363 miles, 1120 yards.

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QUESTIONS.

1. In the London *Athenæum* of December 25, 1869, is a notice of Caxton's "Fifteen O's, or Prayers beginning with O." Will some one tell us what these prayers are, and send them for publication in N. & Q.? THOS. C. BOLTWOOD.

2. What are the names of Jupiter's four satellites? * * * *

3. Have the Jews ever accepted of any Messiah, and if so, who was he, and when? CHRISTIAN.

4. What was the oath of Pythagoras, and where can it be found? J. O. E.

5. Where can the Pope's curse be found, used in the excommunication of a person from the Holy Catholic Church? J. O. E.

6. From what is the word *Pyramid* derived? LOGOS.

7. The "three bad kappas," we are told by classical writers, were "Cappadocia, Cilicia, and Crete." Why is the second now pronounced *Silisia?* LOGOS.

8. Who is the first Saviour mentioned in the Bible as such, and where? LOGOS.

9. How many ways of voting are there in the present existing secret societies of the day, and what are they? NOVITIATE.

10. Who is the real ancient author of the exclamation "*Eureka!*" (I have found it!), and with what discovery was it ejaculated? The correct answer will settle a dispute. L.

11. Did Gautama the Buddha leave any one commandment containing his doctrines summed up? We are told that Confucius formulated his doctines into the Golden Rule; and that Jesus the Christ summed the law and the prophets up into two commandments. (See Matt. XXII, 37; Mark XII, 30; Luke X, 27.) CATECHUMEN.

12. Does there exist at the present time any traces near the coast of Norway of what is recorded as a *maelstrom*? HANNAH.

12. The followers of Gautama Buddha are called *Buddhagama*, that is, "approaching or coming to enlightment." The missionaries in the East write the word *Christianiagama* for Christianity. Are the Christians *Christiagama?* Their word for "religion" is *bandhana*; therefore, would the Christian religion be *Christianibandhana?* ELFIN FOSTER.

13. What was the name by which America was first known? W.

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

"Thou seed of a Divine Mind art sprung from Hercules."—EURIPIDES.

VOL. VI. JUNE, 1889. No. 6.

American College Cheers.

The following collection of college cheers was made by *T e World Almanac*, through correspondence with officials ofthe respective institutions.

ALLEGHANY. Alleghe ! Alleghe ! 'rah ! boom ! Alleghany !

AMHERST. 'Rah ; 'rah-'rah ; 'Rah ; 'rah-'rah ; Am-h-e-r-s-t !

BATES B-a-t-e-s ! 'rah ! 'rah ! 'rah ! Boom-a-la-ka ! boom-a-la-ka ! boom ! Bates ! boom !

BOWDOIN. B-o-w-d-o-i-n ! 'rah ! 'rah ! 'rah !

BROOKLYN, POLYTECHNIC. 'Rah ! 'rah ! 'rah ! P-o-l-y ! Tiger !

BROWN. 'Rah, 'rah ! 'rah, 'rah ! 'rah, 'rah !

CALIFORNIA, UNIVERSITY OF. Ha ! ha ! ha ! Californi-a ! V. C. Berkley ! Zip ! Boom ! ah !

COLBY. C-o-l-b-y, 'rah ! 'rah ! 'rah !

COLUMBIA. H'ray ! h'ray ! h'ray ! C-o-l-u-m-b-i-a !

CORNELL. Cornell ! I yell, yell, yell, Cornell !

DARTMOUTH. Wah, who, wah ! wah, who, wah ! do, didi, Dartmouth ! Wah, who, wah !

DICKINSON. Rip ! 'rah ! bus ! bis ! Dickinsoniensis !

GEORGETOWN, D. C. Georgetown, 'rah ! Georgetown, 'rah ! Georgetown, tiger, sis, boom, ah !

HAMILTON. 'Rah ! 'rah 'rah ! Ham-il-ton ! Zip, 'rah, boom !

HARVARD. 'Rah, 'rah, 'rah ! 'rah, 'rah, 'rah ! 'rah, 'rah, 'rah ! Harvard !

HOBART. Hip, Ho-bart ! hip, Ho-bart ! hip, Ho ! hip, Ho ! Hobart !

INDIANA UNIVERSITY. I-U ! I-U ! I-U ! 'rah, 'rah, 'rah ! saith boom, bang !

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IOWA, UNIVERSITY OF. S. U. I! S. U. I. giddy, giddy, uni! S. U. I!
KANSAS, UNIVERSITY OF. Roch, chalk! Jay, hawk! K. U.
KENYON. 'Rah! 'rah! 'rah! K-e-n-y-o-n! Kenyon!
LAFAYETTE. 'Rah, 'rah, 'rah! Tiger! La-fay-ette!
LEHIGH UNIVERSITY. Hoo rah, h'ray! hoo-rah, h'ray! h'ray, h'ray, h'ray! Lehigh!
MIDDLEBURY. Midd', Midd', Middlebury! 'Rah, 'rah, 'rah!
MINNESOTA, UNIVERSITY OF. 'Rah! 'rah! 'rah! Ask-your-mah! Minne-so-ta!
MT. ST. MARY'S. 'Rah! 'rah! 'rah! M-t-S-t-M-a-r-y s!
NEW YORK, COLLEGE OF THE CITY OF. 'Rah, 'rah, 'rah! C. C. N. Y.!
NEW YORK, UNIVERSITY OF THE CITY OF. 'Rah, 'rah, 'rah! N. Y U.! sis! boom! ah-h-h!
NOTRE DAME. 'Rah, 'rah, 'rah! U-N-D! U-N-D!
PENNSYLVANIA, UNIVERSITY OF. Hoo-rah! Hoo-rah! Hoo-rah! Penn-syl-va-ni a!
PRINCETON. Hurrah! Hurrah! Hurrah! Tiger–sis-s-s! boom! ah!
ROCHESTER, UNIVERSITY OF. Hoi! hoi! hoi: 'rah! 'rah! 'rah! Rochester!
RUTGERS. 'Rah! 'rah! 'rah! bow-wow-wow! Rutgers!
STEVENS INSTITUTE. Boom-rah! Boom-rah! Boom-rah! Stevens!
ST. JOHN'S. S-J! S-J! hip, hip, hooray, hooray!
SWARTHMORE. 'Rah, 'rah, 'rah! 'rah, 'rah, 'rah! Swarthmore, Swarthmore! hoo-ray!
TENNESSEE, UNIVERSITY OF. 'Rah, 'rah! bim-boom-bee! 'rah, 'rah! Tennessee!
TRINITY. 'Rah! 'rah! 'rah! Trinity! Boom-'rah! boom-'rah! Trin-i-ty!
TUFTS. 'Rah, 'rah, 'rah! 'rah, 'rah, 'rah! Tufts!
UNION. 'Rah, 'rah, 'rah! U-n-i-o-n? hikah, hikah, hikah!
VERMONT, UNIVERSITY OF. 'Rah, 'rah, 'rah! 'rah, 'rah, 'rah! U.-V.-M.! 'rah, 'rah!
VIRGINIA, UNIVERSITY OF. 'Rah, 'rah, 'rah! U-ni-V! 'rah, 'rah, 'rah! Var-si-ty! Vir-gin-ia!
WASHINGTON AND LEE. Chich-a-go-runk! go-runk! go-runk! ha, ho, hi, ho! Wash-ing-ton and Lee!
WESLEYAN, UNIVERSITY. 'Rah, 'rah! 'rah, 'rah! Wes-lei-an-a! 'rah, 'rah! 'rah, 'rah!
WILLIAMS. 'Rah, 'rah, 'rah! Will-yums! yams,! yums! Will-yums!
WISCONSIN, UNIVERSITY OF. U! 'rah, 'rah, 'rah! Wis-con-sin!
WOOSTER, UNIVERSITY OF. 'Rah, 'rah, 'rah! W-two O-ster! bang! boom! whiz!
YALE. 'Rah, 'rah, 'rah! 'rah, 'rah, 'rah! 'rah, 'rah, 'rah! Yale!

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QUESTIONS AND ANSWERS.

THE SENTENCE OF JESUS. (Vol. VI, p. 226.) Rabbi Solomon Schindler, of Boston, has the following communication in the Boston *Herald* of November 17, 1888, in reply to "the Sentence of Jesus," published in the same paper, November 9 :

"I shall at present not deny the statement of your correspondent that a plate dating back to the 12th century, and containing what purports to be the death sentence of Jesus, has been discovered in some library, but even from the translation which your correspondent publishes, it can be seen that the document is a forgery, one of those pious frauds which so frequently occurred during the dark ages. I wish therefore to point out to my orthodox Christian friends who may have read the article in the *Herald*, some passages in the translation which will prove that the document (if it indeed exists), is a forgery, and a very clever one besides.

1. Pilate would never have called Jerusalem "the most holy city of Jerusalem," especially not in an official document. This passage alone betrays the hand of some Christian forger.

2. The grounds upon which he passed the sentence would have been ridiculous in the eyes of any Roman. They are in fact copied from the gospel, which he must have anticipated. If Jesus was crucified at all, Pilate removed him without trial or sentence, on the suspicion that he might create a revolt on the Passover festival. In times of war the Romans were known to set aside all laws.

3. It must have been purely accidental that Jesus was executed in common with two robbers. Whether they were Jews or Gentiles, even, the gospels do not tell. The pious forger of the 12th century, however, carries this accident into the death sentence, making Pilate decree what was a pure coincidence. Now, according to the gospel narrative, the whole transaction, trial and all, passed off in less time than it could be duplicated. How could Pilate have strengthened his sentence in such a manner as to order that he should be crucified between two robbers? Were there commonly robbers at his disposal to be executed at so short a notice? Did he ever make use of them as a means of thus still more humiliating an offender?

4. The most laughable part of the forgery are the signatures attached to the document. The first witness signed himself as Daniel Robani, pharisee. It takes all the Christian ignorance of the 12th contury both to fabricate and swallow such a signature. The word pharisee was no official title that any person could or would assume; it was a nickname, which nobody ever thought of placing behind his name, as little as any witness, to some legal document, today, would

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subscribe his name as John Jones, mugwump, or John Jones, copperhead, or John Jones, know-nothing.

5. To top the climax, it is said that the document appears to have been written in Hebrew, while it is well know that the Romans made use, in all their official dealings, only of the Latin tongue. If, however, Pilate, in this instance, should have made use of the Hebrew idiom, he would also have made use of the Hebrew date, and not have dated the document, as the translation gives it, in Roman fashion.

Sapienti sat. The plate may be worth to Lord Howard f. 2,890 as an antiquity which does prove how pious Christians in the 12th century endeavored to prop up their unhistorical, and, therefore, untenable Christian myths of all kinds of devices. As a piece of evidence wherewith to prove the truth and exactness of the gospel stories, such a plate is worthless, even if it should exist."

SOLOMON SCHINDLER, Rabbi Temple Adath Israel.

ELIOT'S INDIAN BIBLE. (Vol. VI, p. 240.) The story quoted in NOTES AND QUERIES for February, 1889, about Eliot's mistake in translating "cried through the lattice," so that the Indians read that she cried through an eel-pot, was long ago exploded by Dr. J. Hammond Trumbull of Hartford, Conn., who in a paper published with the Transactions of the American Philological Association, 1872, says of this story : " There are only two exceptions to be taken to it." (The first is of no present consequence.) The second : " That in the verse in question Eliot *did not translate the word* 'lattice' *at all* ; but transferred it from the English to the Indian text, adding only the locative suffix, '*papâshpe lattice-at*,' through the lattice."

F. J. PARKER, Boston, Mass.

THE PLANETARY DAYS OF THE WEEK. What are the so-called " Planetary days of the week " ? ANDREW.

The planetary days of the week are the *names* of the days which would have followed by mythology and etymology to make the week complete ; they might be placed thus for comparison, and completion :

Sunday,	Sun's day,	Sun.	Sunday,	*Dies Solis.*
Monday,	Moon's day,	Moon.	Monday,	" *Lunæ.*
Tuesday,	Tuisco's day,	War.	Marsday,	" *Martis.*
Wednesday,	Woden's day,	Odin.	Mercurisday,	" *Mecurii.*
Thursday,	Thor's day,	Thunder.	Jovsday,	" *Jovis.*
Friday,	Friga's day,	Love.	Vensday,	" *Veneris.*
Saturday,	Saturn's day,	Saturn.	Saturday,	" *Saturni.*

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THE JEWS' MESSIAH. (Vol. VI, p. 300.) Rabbi Solomon Schindler, of Boston, in his work on "Messianic Expectations, and Modern Judaism," has a chapter (v) on *A Genuine Messiah.* He says that Bar Kochba, or Bar Kosiba, which name he derived from the small town of Kosiba, or Kesib, was the embodiment of all the qualities expected to appertain to a Messiah; that Rabbi Akibi, the acknowledged head of the Jewish community at the advent of Bar Kochba, pointed him out as the long expected one and played a principal part in the Bar Kochbean war; that Bar Kochba died a hero and a patriot for the Jews about the year 133; that the writer of Mark witnessed the Bar Kochbean revolt, and put the graphic picture of it into the mouth of Jesus as a prophecy. Akiba suffered martyrdom at the hands of the Romans, being flayed alive, his last words being, "Hear, O Israel: the Lord our God is *one* Lrod." (Deut. VI, 4). The revolt of Bar Kochba is no myth, although no poet has sung his praise. A legend says, that when a man brought the head of Bar Kochba to Severus, and claimed that he had slain him, the latter said "If this man had not been killed by God himself, the power of a mortal could never have harmed him." Another legend says that his body, when found, was encircled by a snake, which would allow nobody to harm it.

According to McClintock & Strong's Cyclopædia, the name Bar Kochba is Chaldean, and means "son of the star," and he applied to himself the prophecy, "There shall come a Star out of Jacob, and a Sceptre shall rise out of Israel (Num. XXIV, 17). He issued coins having on one side his own name, and on the other "Freedom of Jeursalem." The new city was *Ælia Capitolina*, founded on the site of Jerusalem.

"A KING CAN KILL, A KING CAN SAVE." Who is the author of, and where is this line found? H. B. S.

The line is a slight change from the words of a poem in a dialogue by John Gower. It occurs in "Confessio Amantis," Book VII, the subject being: "Of the three, Wine, Women, and the King, which is the strongest?" Harpages says:

"A kynge maie spille, a kynge maie saue,
A kinge maie make a lorde a knaue,
And a knaue a lorde also;
The power of a kynge stont so;
That he the lawes ouerpasseth;
What he will make lesse, he lesseth,
What he will make more, he moreth."

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A CENTURY OF INVENTIONS. (Vol. VI, p. 284.) This is the name of a book contianing an account of 100 inventions, by the Marquis of Worcester, first printed in 1663. Henry Dircks published the "Life, Times, and Scientific Labors of the Second Marquis of Worcester," and reprinted the "Century of Inventions," London, 1665. The title-page of the latter is as follows :

"A Century of the Names and Scantlings of such Inventions, as at present I can call to mind to have tried and perfected, which (my former notes being lost) I have, at the instance of a powerful Friend, endeavered now in the Year 1655, to set these down in such a way as may sufficiently instruct me to put any of them in practice. *Artis & Naturæ proles.* London: Printed by J. Grismond in the year 1663."

The following is a synoysis of the 100 inventions as given in the English *Penny Cyclopædia* :

1. Seals abundantly significantly.
2. Private and particular to each owner.
3. One-line cipher.
4. Reduced to a point.
5. Varied significantly to all of the 24 letters.
6. Minute and perfect discourse by colors.
7. To hold the same by night.
8. To level cannons by night.
9. Ship-destroying engine.
10. How to fasten from aloof, and under water.
11. How to prevent both.
12. An unsinkable ship.
13. False-destroying decks.
14. Multiplied strength in little rooms.
15. Boat driven against wind and tide.
16. Sea-sailing fort.
17. Pleasant floating garden.
18. An hour-glass fountain.
19. Coach-saving engine.
20. Balance water-wheel.
21. Bucket-fountain.
22. An ebbing and flowing river.
23. An ebbing and flowing castle clock.
24. Strength increasing spring.
25. Double-drawing engine for weights.
26. To and fro lever.
27. Most easy level draught.
28. Portable bridge.
29. Movable fortification.
30. Rising bulkwark.
31. An approaching blind.
32. Universal character.
33. Needle
34. Knotted string
35. Fringe
36. Bracelet
37. Pink glove
38. Sieve
39. Lanthorn

(33–39) alphabet.

40. 41. 42. Alphabet by the { smell, taste, touch,
43. Variations, all or each of these.
44. Key pistol.
45. Most conceited tinder-box.
46. An artificial bird.
47. An hour water-ball.
48. Screwed ascent of stairs.

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49. Tobacco tongs-engine.
50. Pocker ladder.
51. Rule of gradation.
52. Mystical jangling of bells.
53. Hollowing of water-screw.
54. Transparent water-screw.
55. Double water-screw.
56. An advantageous change of centers.
57. Constant water-flowing and ebbing motion.
58. An often-discharged pistol.
59. An especial way for carabines.
60. Flask charger.
61. Way for musquets.
62. Way for a harquebuss.
63. For sakers and minyons.
64. For the biggist cannon.
65. For a whole side of ship musquets.
66. For guarding several avenues to a town.
67. For musquetoons on horseback.
68. Fire water-works.
69. Triangle key.
70. Rose key.
71. Square key, with a turning screw.
72. An escutcheon for all locks.
73. Transmittable gallery.
74. Conceited door.
75. Discourse woven into tape or ribbon.
76. To write in the dark.
77. Flying man.
78. Continually going watch.
79. Total locking of cabinet boxes.
80. Light pistol barrels.
81. Combe-conveyance for letters.
82. Knife, spoon, or fork conveyance.
83. Rasping mill.
84. An arithmetical instrument.
85. An untoothsome pear.
86. An imprisoning chair.
87. Candle mould.
88. Brazen head or a speaking figure.
89. Primeo gloves.
90. Dicing-box.
91. An artificial ring-horse.
92. Gravel engine.
93. Ship-raising enging.
94. Pocket engine to open any door.
95. Double cross-bow.
96. Way for sea-banks.
97. Perspective instrument.
98. Semi-omnipotent engine.
99. Most admirable way to raise weights.
100. Stupendous water-works.

He declares these to be "*in bonum publicum, et ad majoram Dei gloriam.*"

"Besydes many omitted, and some of three sorts willingly not set downe, as not fitt to be divulged, least ill use may be made thereof; butt to show that such things are also within my knowledge, I will here in myne own cypher set down one of each, not to be concealed when duty and affection obligeth me."

The Marquis describes each of these inventions ingeniously, and says of the 98th especially:

"And therefore I call this *A semi-omnipotent Engine*, and do intend that a model thereof be buried with me."

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"EUREKA" — ARCHIMEDES OR PYTHAGORAS. (Vol. VI, p. 300.) Anthon, in his "Classical Dictionary," article on *Archimedes*, p. 179, says, in reference to this ancient mathematician :

"His knowledge of the doctrines of specific gravities is proved by the well known story of his discovery of the mixture of silver with gold in King Hiero's crown, which fraud he detected by comparing the quantity of water displaced by equal weights of gold and silver. The thought occurred to him while in the bath, on observing that he displaced a bulk of water equal to his own body ; when, at once, perceiving a train of consequences, he ran naked out of the bath into the street, exclaiming *Eureka!* ("I have found it!"). This part of of the story, however, is regarded by some as a mere exaggeration."

Anthon says Archimedes was a native of Syracuse, in Sicily, and flourished about 250 B. C. Under what masters he studied, or how much of his extraordinary knowledge he acquired from his predecessors, is not known. That he travelled into Egypt appears certain; but it is probable that, with his scientific acquaintance with that country he communicated more than he received.

The text-books for instruction in Ancient Craft Masonry contains nine classes of emblems in the Master mason's degree — the sixth of which is the "Forty-seventh Problem of Euclid." We copy from the "Trestle-Board," by Charles W. Moore (Boston, 1861), p. 43, the section relating to this problem :

"This was an invention of our ancient friend and brother, the Great Pythagoras, who, in his travels through Asia, Africa, and Europe, was initiated into several orders of priesthood, and is said to have been raised to the sublime degree of a Master Mason. This wise philosopher enriched his mind abundantly in a general knowledge of things, more especially in Geometry, or Masonry. On this subject he drew out many problems and theorems ; and among the most distinguished he erected this, when in the joy of his heart, he exclaimed *Eureka!* signifying in the Grecian language, "I have found it!" and upon the discovery of which he is said to have sacrificed a hecatomb. It teaches Masons to be general lovers of the arts and sciences."

This record is substantiated, in regard to the invention of the theorem, and problem, by Anthon (article *Pythagoras*, p. 1157), but not in the exclamation of *Eureka!*

Pythagoras lived, according to the best chronologists, between the years 608 B C. and 466 B. C. ; Visconti agreed with Eusebius in fixing the date of his death at 496 B. C. This antedates the time

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of Archimedes by 246 years. Pythagoras died at a very advanced age, it is said, and Archimedes was slain at the age of 75 years.

Now on what authority does either Charles Anthon or Charles W. Moore make the statement as to the person who exclaimed *Eureka!*

How a Spider Spins a Thread. (Vol. VI, p. 252.) This is a very interesting process, and like many other arts of the "lower orders" of beings, displays intelligence that the word "instinct" will not cover. The spiders that spin these webs have light slim bodies and long legs. They get on some elevated point and raise the body till the spot where the web is spun out is the highest part of the insect, and then the web is thrown to the breeze and floats away. After a little time the spider turns and pulls on the web with its claws, and if he finds by the pulling that the web has not attached itself to something, he spins out some more, and so continues until he finds the web is made fast at the other end. Then the spider crosses on it, and sometimes journeys from tree to tree in the same way, or the spider constructs a net to catch flies where he remains. I have watched this process many times, and also another, to explain which I will say that the web of the spider is in a fluid state until it comes to the air, and it comes from the body not all in one stream, but through hundreds of minute openings, and the insect can control the outlets so that the streams will twist into one, or remain separate and form a fiat mass so fine that it looks like mist. This is often seen where a spider catches a large insect in his net and winds it up to stop its struggles. Now when a spider wants to take a journey in the air, where there is no distant object to anchor to, he attaches his web to some projecting point, and lets himself down a few inches, and then works all the time spinning without twisting. He repeats this till the mass is sufficient to float in the air and bear up his own weight. he then mounts his raft and sails away. O. H. L., Manchester, N. H.

"Completing the Square." (Vol. VI, p. 243.) I have a copy of the 4th edition of Ryan's Algebra, dated 1843, on pp. 246-7 of which is given the rule for "completing the square." I also have a copy of Ryan's Algegra, dated 1824, which appears to be the 1st edition, on p. 395 of which is given the rule for "completing the square." Hence it seems that Robinson was not very familiar with the contents of Ryan's Algebra. Artemas Martin, Washington, D. C.

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DERIVATION OF THE WORD PYRAMID. (Vol. VI, p. 300.) Volney says, according to Joseph T. Goodsir (Ethnic Inspiration, p. 265) that the word "Pyramid" is from an Egyptian word *Pooramis*, signifying "a cave."

Bunsen says (Egypt's Place, Vol. I p. 474; Vol. IV, p. 107) that it is from *Pyr*, "division," and *Met*, "ten." This is favored by C. Piazzi Smyth (Life and Works, Vol. III, p. 121.)

John Taylor says (The Great Pyramid, Why was it Built, p. 191) that there is reason to suppose the name *Pyramis* may have had reference to *pyrós*, "wheat," and that the pyramid coffer in the Great Pyramid was a "measure of capacity of wheat," and that the structure itself may have been called a "wheat measure."

Hargraves Jennings says (Rosicrucians, 1870, p. 215) that the word is from *Pyr*, "fire" (division produced by fire), and *Metron*, "ten" (measures or spaces numbered as ten). The whole word means, and the monument bearing this name means, "the original Ten Measures or part of the Fiery Ecliptic or Solar Wheel, or the Ten Original Signs of the Zodiac. Therefore the pyramids are commemorative altars raised to the divinity Fire."

Sir Gardner Wilkinson says (Rawlinson's Herodotus) that the word is from *Pyrŏn*, "a cake of pointed figure." Kenrick also agrees with this derivation.

Rev. G. Trevor says that the word is from *perami*, "lofty," and thought to be the same with the Hebrew *Charaboth*, which in Job III, 14, signifies a "sepulchre," though rendered in King James's version "desolate places."

Wilkins says (Dessertation on the Coptic Language) that pyramid is from *pouro*, "a kind," and *misi*, "a race, or generation," in the Coptic language.

"MANY A SLIP BETWIXT THE CUP AND THE LIP." Whence the origin of the proverb? XENOS.

We are told by Eustathius that there was an ancient king Ancæus of Samos, who paid particular attention to the cultivation of the vine. On one occasion he was told by a slave, whom he was pressing with hard labor in his vineyard, that he would never taste of its product. After the vintage had been gathered in and the wine made, Ancæus, in order to falsify the prediction, was about to raise a cup of liquor to his lips, deriding, at the same time, the pretended prophet (who, how-

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ever, merely told him, in reply, that there were many things between the cup and the lip), when tidings came that a bore had broken into the vineyard. Throwing down the cup with the untasted liquor, Ancæus rushed forth to meet the animal, and lost his life in the encounter. Hence arose the proverb,

Multa cadunt inter calicem supremaque labra.

"Many things fall between the edge of cup and the lips."

The story given here, we are aware is related differently by other writers, but the point in all is the same.

QUOTATION FROM VIRGIL. (Vol. VI, p. 268.) This quotation,

"Macte nova virtue puer; sic itur ad astra;
Diis genite, et geniture, Deos."

is found in Virgil's Æneid, (Book IX, lines 641-642). It was addressed by Apollo to Ascanius, called Iülus (often "little Iülus"), the son of Æneas and Creüsa; Æneas was son of Anchises and Venus; (Creüsa was daughter of Priam and Hecuba.) Hence Apollo's words:

"Go on spotless boy, in the paths of virtue; it is the way to the stars; offspring of the gods thyself; so shalt thou become the father of gods."

"Go on, *hopeful* boy, improve in virtue early begun; thus mortals to the stars ascend, descendant of the gods, and from whom gods are to descend."—*Davidson Translation*, 1811.

"Go on, increase in early valor, O boy! Such is the pathway to the stars, O descendant of the gods, and from whom gods are to descend."—*Theo. A. Buckley's Davidson's Translation Revised.*

"On with fresh courage, boy! So mount the way
To glory, thou of gods the son, of gods
To be the sire."—*John D. Long's Translation.*

"Go on, increase in valor, boy;
Such is the pathway to the stary heights,
Descendant and progenitor of gods."—*Christ. P. Cranch's Translation.*

"Speed on in new-born valor, child!
O son of Gods and sire of Gods."—*William Morris's Translation.*

"Advance, illustrious youth! increase in fame,
And wide from east to west extend thy name—
Offspring of gods thyself; and Rome shall owe
To thee a race of demigods below.
This is the way to heaven: the powers divine
From this beginning date the Julian line."—*Dryden's Translation.*

PROBLEM. "A man has a field cnclosed by a circular fence, the posts being one rod apart, and the fence ten rails high. There are as many acres in the field as there are rails in the fence. How many rails in the fence?" F. K. H.

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FORMULATION OF THE DOCTRINES OF GAUTAMA THE BUDDHA. (Vol. VI, p. 300.) The doctrines of Gautama, like those of Confucius and Jesus, were epitomized into a few words, namely :

1. *Sabbbapápassa akaranam ; 2. Kusalassa upasampadá ; 3. Sa chitta pariyo dapanam. Etam Buddhánu sáranam.*

1. To cease from sin ; 2. To get virtue ; 3. To cleanse one's own heart. This is the religion of the Buddhas.

These celebrated words have a meaning that should not be overlooked by the student of Buddhistic philosophy. The first line embodies the whole spirit of the *Vinaya ;* the second line embodies that of the *Sutta ;* the third embodies that of the *Abidhamma.* Thus in three lines, collectively comprising only eight Pali words, are condensed the entire essence of the Buddhistic Scriptures. According to Mr. Rhys-Davids, there are about 1,751,800 words in the whole text of the three *Pitakas.*

A Magic Square---Magic, Nasik, and 100-Ply.

Particulars of the magic square on the opposite page, 20 numbers in each row, giving 400 numbers in all.

1. It is " magic," the rows, columns, and diagonals summing alike, namely, 4,010.

2. It is " nasik ;" any 20 consecutive numbers, in standing direction, taken at random, likewise sum 4,010. (In this point the square is to be imagined repeated indefinitely on all sides, as a pattern of wall paper ; but to avoid this trouble, the fact may be tested by dividing the square by an imaginary line anywhere in a horizontal or perpendicular direction, and the sum of the two short parallel diagonals will equal 4,010. Thus, divide, say, by line A B, then the diagonal A C added to its parallel short diagonal B D, will sum 4,010 ; or, the short diagonal D A added to its parallel C B will also sum 4,010.)

3. It is " 100-ply ;" that is, any square group containing 100 numbers, taken at random, sums alike, namely, 20,050. (This may be proved, without going thrugh the task of summing the groups, by noticing that any 10 consecutive numbers in any row, or column, taken at random, equals its corresponding parallel, 10 places distant. Thus, from 9 to 146 inclusive, in third column, equals the sum of the 10 parallel numbers from 259 to 396 inclusive, in thirteenth column ; and so on.) T. S. BARRETT, London, Eng.

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A

1	7	13	19	25	176	182	188	194	200	251	257	263	269	275	326	332	338	344	350
14	20	21	2	8	189	195	196	177	183	264	270	271	252	258	339	345	346	327	333
22	3	9	15	16	197	178	184	190	191	272	253	259	265	266	347	328	334	340	341
10	11	17	23	4	185	186	192	198	179	260	261	267	273	254	335	336	342	348	329
18	24	5	6	12	193	199	180	181	187	268	274	255	256	262	343	349	330	331	337
276	282	288	294	300	301	307	313	319	325	26	32	38	44	50	151	157	163	169	175
289	295	296	277	283	314	320	321	302	308	39	45	46	27	33	164	170	171	152	158
297	278	284	290	291	322	303	309	315	316	47	28	34	40	41	172	153	159	165	166
285	256	292	298	279	310	311	317	323	304	35	36	42	48	29	160	161	167	173	154
293	299	280	281	287	318	324	305	306	312	43	49	30	31	37	168	174	155	156	162
126	132	138	144	150	51	57	63	69	75	376	382	388	394	400	201	207	213	219	225
139	145	146	127	133	64	70	71	52	58	389	395	396	377	383	214	220	221	202	208
147	128	134	140	141	72	53	59	65	66	397	378	384	390	391	222	203	209	215	216
135	136	142	148	129	60	61	67	73	54	385	386	392	398	379	210	211	217	223	204
143	149	130	131	137	68	74	55	56	62	393	399	380	381	387	218	224	205	206	212
351	357	363	369	375	226	232	238	244	250	101	107	113	119	125	76	82	88	94	100
364	370	371	352	358	239	245	246	227	233	114	120	121	102	108	89	95	96	77	83
372	353	359	365	366	247	228	234	240	241	122	103	109	115	116	97	78	84	90	91
360	361	367	373	354	235	236	242	248	229	110	111	117	123	104	85	86	92	98	79
368	374	355	356	362	243	249	230	231	237	118	124	105	106	112	93	99	80	81	87

D

313

C

B

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PYTHAGORAS'S DOCTRINE OF NUMBERS. What is the Pythagorean doctrine of numbers which has been several times alluded to in your pages? ANDREW.

Mullach justly observes that the exposition of the significance and potency of numbers in the Pythagorean theory, would require an ample volume. He therefore notices them very briefly. The like course must be adopted here, and a summary, abridged from those given by S. Baring-Gould, must suffice.

1. The *Monad*, or unit, is the beginning and end of all. It is the symbol of existence, identity, equality, conversation and harmony.

2. The *Dyad*, or two, is the origin of contrasts, the symbol of diversity, division, change, and disorder.

3. The *Triad*, or three, is the first of unequals. It represents God and the soul of man.

4. The *Tetrad*, or four, is the most perfect of numbers; the root, or origin, of all things; when the soul derives its eternal nature; it furnished the Pythagorean oath.

5. The *Pentad*, or five, is everything, supplying the principle of everything, and repelling evil spirits.

6. The *Hexad*, or six, is the number of good fortune.

7. The *Heptad*, or seven, is a sacred number, generating good and evil.

8. The *Octad*, or eight, the first cube, is a perfect number.

9. The *Ennead*, or nine, being the square of three, is sacred.

10. The *Decad*, or ten, the sum of the first four numbers, contains all numeric relations. All science proceeds from it and returns to it.

THE OATH OF PYTHAGORAS. (Vol. VI, p. 300.) The following is the form as given in Oliver's "Pythagorean Triangle," p. 103:

> "By that pure, Holy, Four-Lettered Name on high,
> Nature's eternal fountain and supply,
> The parent of all souls that living be,
> By Him, with faithful oath, I swear to thee.

MASCOT. (Vol V, p. 96.) The New York *Sun* (Dec. 23, 1888). says that the word *Mascot* comes from the French gambler's slang. An "escot" was something that brought luck to the owner; in time, it became mascot, from *mon escot, mo'escot, m'ascot.* Audran, in his opera, "The Mascot," popularized the word.,

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THE TOUR OF THE CHESS KNIGHT. I desire to present one tour which interested me several years ago. No doubt the publishers will present Volume I, Nos. 1 to 20, for the first correct solution sent to them. [We will.] ZENO.

lay	tle	on	dom	firm	still	square	qured
ly	and	press	day	the	board	ly	strike
bat	this	Per	a	free	to	chec	from
the	fierce	who	Greeks	down	Mar	for	on
reads	hard	thon	sian	youth	the	square	the
as	right	each	poured	at	horde	ward	fight
long	so	knight	ly	through	the	on	leaps
as	on	life's	may	up	bold	and	to

THE TUNE THE OLD COW DIED ON. How many have used this expression without any definite idea of its meaning or origin. It seems to have come to us from over the water. In Scotland and the north of Ireland this saying is very common in the mouths of the peasantry. It arose out of an old song which ran like this :

"There was an old man and he had an old cow,
And he had nothing to give her ;
So he took out his fiddle and played her a tune :
Consider, good cow, consider ;
This is no time of year for the grass to grow ;
Consider, good cow, consider."

The old cow died of hunger ; and when any grotesque and melancholy song or tune is uttered, the north country people there say, that is "the tune the old cow died on." O. H. L.

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QUESTIONS.

1. What was King Solomon's code of six principles which guided him in the administration of justice in Israel? A. A. D.

2. Of what fraternity is the lock-and-key the insignia? A. B. G.

3. Why is the *witch*-hazel and *witch*-grass so called? X.

4. What spoken language is the most expressive to preserve the true intent and meaning of the Hebrew language when translated into such spoken language? JACOB H. MORTON.

5. Did the inhabitants of Barbary in the north of Africa originally give the name *babrarians* to the northern hordes? LOGOS.

6. Who is the first "seventh son" mentioned in the Bible. T.

7. What is said to be the first book written, now in existence; and also the first book written, not now extant? T.

8. What is said to be "Symmes's Hole" in the earth, and what book did he publish on the theory. PHILOMATH.

9. What systems have been proposed to hold correspondence between the inhabitants of the earth and the moon (if any), and who first proposed such correspondence? CYNTHIA.

10. Who were the 24 pseudo-christs (false-messiahs) who are said to have flourished in the Christian era? G. S. CLARK.

11. What is the name of the plant on the leaves of which are the close resemblance of some of the Greek alphabet, and what is the legend in reference to the same? ENOCH.

12. What were the *words* to which Homer alludes, Iliad Book XII, line 112, "Pronounced those solemn words that bind a god," spoken by Jupiter? ALPHA.

13. What is *Koreshan* science mentioned in previous numbers of your magazine? E. L. B.

14. Does Homer, in the *Iliad* or *Odyssey*, mention "the wooden horse" which Virgil so graphically describes in his *Æneid* Book II? If not, how is the omission accounted for? ADELPHUS.

15. What islands are known as "the Devil's Land"? W.

16. What was the famous *wheel question* published in the *Scientific American* some twenty years ago? JONATHAN.

17. What were the names of Greek months, and how did they correspond with our calendar? ANDREW.

18. What have been the leading annual almanacs published in New England during the present century? IOWA.

19. In what book can the interpretations of the Cova, or Lineations, of Fohi be found? Can you publish them? MYSTIC.

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

"The time is born for Enoch to speak, and Elias to work again."—LAW.

VOL. VI. JULY, 1889. No. 7.

The Hexagrams of "The Yi King."

The "Yî-King" is one of the series of the Sacred Books of the East (Vol. XVI) edited by F. Max Müller; it is Part II of the Sacred Books of China, the texts of Confucianism, translated by James Legge in 1854-55, though he says he did not understand its mysterious teachings till 1874. He claims that his interpretations will be approved by any sinologist who will examine the work, "Yü *K*ïh *Z*ăh *K*iang Yî King *K*ieh I," published in 1682 by the Han Lin College, which he calls "The Daily Lectures." Mr. Legge believes that King Wăn and his son Tan were the authors of the "Yî King." He believes with Mencius that "We must try with our thoughts to meet the scope of a sentence, and then we shall apprehend it." The late M. Mohl, who edited the "Yî King" in 1834, said of it, "I like it, for I come to it out of a sea of mist and find solid ground." In 1876, the Rev. Canon McClatchie published a version of the "Yî King, or Classic of Changes," his special object being "To open up the mysteries of Yî by applying to it the key of comparative mythology."

Confucius is reported to have said on one occasion: "If some years were added to my life, I would give fifty to the study of the Yî, and then I might come to be without great faults" (*Analects* VII, 16). He was over seventy when he uttered this, and shows the "Yî King" to have been in existence in his day, and he became fond of it and wrote an appendix to it; his own copy had been read so much that the

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leathern thongs holding the tablets together had been thrice worn out; he said, "Give me several years, and I will endeavor to master the Yî."

The Cova or Lineation of which an interpretation was asked for by "K. T." (Vol. II, p. 650) has been explained by William T. Harris (Vol. III, p. 14). That was attributed to Fo-hi, or Fû-hsî, and contained 8 trigrams which date back to 3322 B. C. These eight were: 1. *kh*ien; 2. tui; 3. lî; 4. *k*ăn; 5. sun; 6. khân; 7. kăn; 8. khwăn.

King Wăn changed the arrangement of Fo hi's trigrams, and made them represent certain relations among themselves, as if they composed one family of parents and children thus:

1. lî, second daughter.
2. sun, oldest daughter.
3. *k*ăn, oldest son.
4. kăn, youngest son.
5. khân, second son.
6. *kh*ien, father.
7. tui, youngest daughter.
8. khwăn, mother.

It is a mooted question who first multiplied the figures, universally ascribed to Fo-hi, to the 64 hexagrams of the Yî. No Chinese writer has explained why the framer stopped at 64 hexagrams, instead of going on to 128 figures of seven lines, 256 figures of eight lines, 512 figures of nine lines, and so on; the cumbersomeness of the changes, and the impossibility of dealing with the changes after the manner of king Wăn, can only be the reason. The origin of the Cova and its amplification is given as follows:

"Heaven produced the spirit-like things (the tortoise and the divining plant), and the sages took advantage of them. (The operations of) heaven and earth are marked by so many changes and transformations, and the sages imitate them (by means of the Yî). Heaven hangs out its (brilliant) figures, from which are seen good fortune and bad, and the sages made their emblematic interpretations accordingly. Ho gave forth the scheme or map, and the Lo gave forth the writing, of (both of) which the sages took advantage."

The Ho is the Yellow River which gave forth the map. This map, according to tradition, contained the outline which served as a model to Fo-hi to make his eight trigrams. Besides the above passage from the "Yî King" Confucius believed in, or spoke of, this map. The Chinese books say "the map was borne by a horse," and preserved in China. The modern story is that a dragon-horse issued from the Hoang Ho (Yellow River) bearing on its back the arrangement of marks which gave Fo-hi the idea. The map has perished, but its

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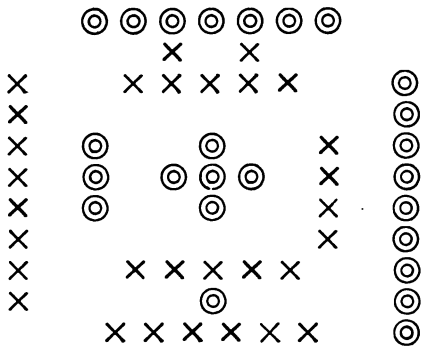
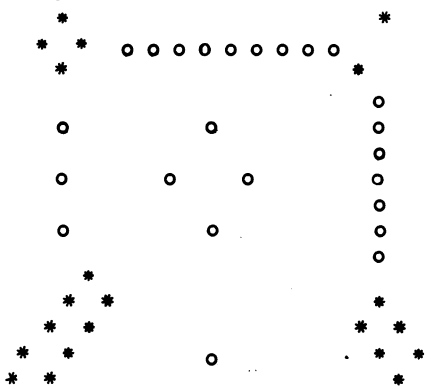
form was restored A. D. 1101-1125. The most approved form is this:



The delineations of the scheme are quite nearly divided, 25 circles to 30 crosses, a total of 55. The circles are 1, 3, 5, 7, 9; while the crosses are 2, 4, 6, 8, 10. These represent Yin and Yang, the dark and the bright, moon-like and the sun-like; the moon is called the Great Obscurity (Thâi Yin); and the sun the Great Brightness (Thâi Yang). Fo-hi in beginning, and king Wăn in extending the trigrams, found it more convenient to use lines, the whole line ——— for the circle, and the divided line — — for the cross. The 1st, 3d, and 5th lines in a hexagram, if they are "correct," as it is termed, should be whole lines; the 2d, 4th, and 6th should be divided lines. Yang lines are strong or hard, and Yin lines are weak or soft. The former indicate vigor and authority, and the latter feebleness and submission.

The accepted representation of the above delineation is as follows:



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Substituting numbers for the number of marks, we have the magic square :

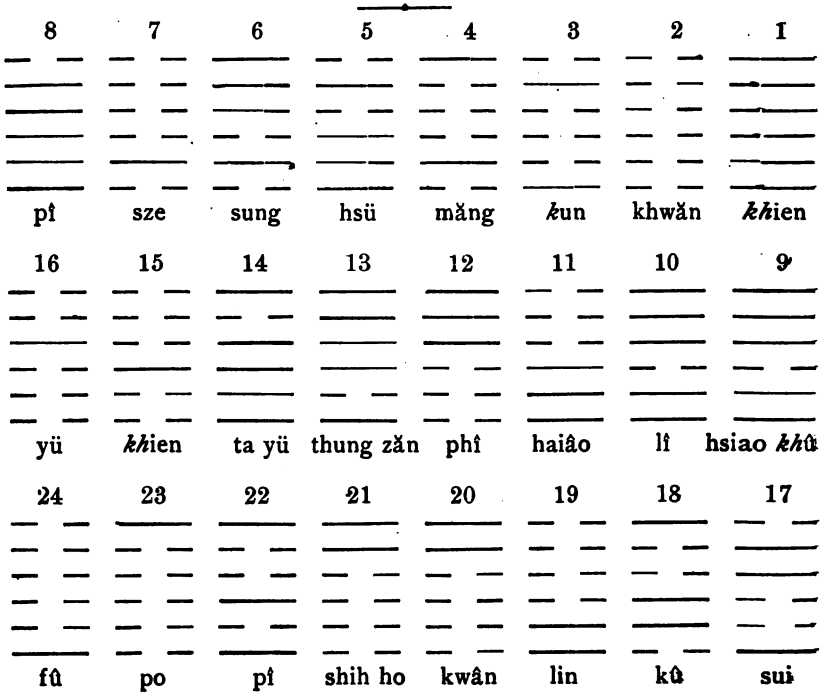
4	9	2
3	5	7
8	1	6

There are, however, differences of interpretation of these schemes as there are doubts as to the original " River Map.

Our phrase *vestiges of creation* illustrates the ever changing phenomena of growth and decay, and might be used as the best expression of " the traces of making and transformations " of the hexagrams. The whole subject is elaborately discussed by Mr. Legge in his translation of the " Yī King ": introduction 55 pages, the " Yí King " 155 pages, appendixes 238 pages ; total 448 pages.

Here follow the hexagrams and interpretations ; this articles also answers " MYSTIC " (Vol. VI, p. 316).

The Sixty - Four Hexagrams.


8 7 6 5 4 3 2 1
pî sze sung hsü măng kun khwăn khien
16 15 14 13 12 11 10 9
yü khien ta yü thung zăn phî haiâo lî hsiao khû
24 23 22 21 20 19 18 17
fû po pî shih ho kwân lin kû sui

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32	31	30	29	28	27	26	25
hăng	hsien	lî	khan	tâ kwo	î	tâ *k'h*û	wû wang

40	39	38	37	36	35	34	33
*k*ieh	*k*ien	khwei	*k*iâ zăn	ming î	3in	tâ *k*wang	thun

48	47	46	45	44	43	42	41
3ing	khwăn	shăng	3hui	kâu	kwâi	yî	sun

56	55	54	53	52	51	50	49
lü	făng	kwei mei	*k*ien	kăn	*k*ăn	ting	ko

64	63	62	61	60	59	58	57
wei 3î	*k*î 3î	hsiâo kwo	*k*ung fû	*k*ieh	hwân	tui	sun

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1. *Kh*ien (represents) what is great and originating, penetrating, advantageous, firm, and correct.

2. Khăn (represents) what is great and originating, penetrating, advantageous, correct, and having the firmness of a mare. When the superior man (here intended) has to make any movement, if he take the initiative, he will go astray ; if he follow, he will find his (proper) lord. The advantageousness will be seen in his getting friends in the south-west, and losing friends in the north-east. If he rest in correctness and firmness, there will be good fortune.

3. *K*un (indicates that in the case in which it presupposes) there will be great progress and success, and the advantage will come from being correct and firm, (But) any movement in advance should not be (lightly) undetraken. There will be advantage in appointing feudal princes.

4. Măng (indicates that in the case in which it presupposes) there will be progress and success. I do not (go and) seek the youthful and inexperienced, but he comes and seeks me. When he shows (the sincerity that marks) the first recourse to divination, I instruct him. If he apply a second and third time, that is troublesome ; and I do not instruct the troublesome. There will be advantage in being firm and correct.

5. Hsū intimates that, with the sincerity which is declared in it, there will be brilliant success. With firmness there will be good fortune ; and it will be advantageous to cross the great stream.

6. Sung intimates how, though there is sincerity in one's contention, he will yet meet with opposition and obstruction ; but if he cherish an apprehensive caution, there will be good fortune, while, if he must prosecute the contention to the (bitter) end, there will be evil. It will be advantageous to see the great man ; it will not be advantageous to cross the great stream.

7. Sze indicates how, in the case in which it supposes, with firmness and correctness, and (a leader of) age and experience, there will be good fortune and no error.

8. Pî indicates that (under the conditions which it supposes) there is good fortune. But let (the principal party intended in it) reëxamine himself, (as if) by divination, whether his virtue be great, uninterrmitting, and firm. If it be so, there will be no error. Those who have not rest will then come to him ; and with those who are (too) late in coming it will be ill.

9. Hsiâo *Hh*û indicates that (under its conditions) there will be progress and success. (We see) dense clouds, but no rain coming from our borders in the west.

10. (Lî suggests the idea of) one's treading on the tail of a tiger, which does not bite him. There will be progress and success.

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11. Thâi (we see) the little gone and the great come. (It indicates that) there will be good fortune with progress and success.

12. In Phî is the want of good understanding between the (different classes of) men, and its indication is unfavorable to the firm and correct course of the superior man. We see in it the great gone and the little come.

13. Thung *Zăn* (or 'Union of men') appears here (as we find it) in the (remote districts of the) country, indicating progress and success. It will be advantageous to cross the great stream. It will be advantageous to maintain the firm correctness of the superior man.

14. Tâ Yû indicates that (under the circumstances which it implies) there will be great progress and success.

15. *Khien* indicates progress and success. The superior man (being humble as it implies), will have a (good) issue (to his undertakings).

16. Yü indicates that (in the state which it implies), feudal princes may be set up, and the hosts put in motion, to advantage.

17. Sui indicates that (under its conditions) there will be progress and success. But it will be advantageous to be firm and correct. There will be no error.

18. Kû indicates great progress and success (to him who deals properly with the conditions represented by it). There will be advantage in (efforts like that of) crossing the great stream. (He should weigh well, however, the events of) three days before the turning point, and those (and those to be done) three days after.

19. Lin (indicates that under the conditions supposed in it) there will be great progress and success, will it will be advantageous to be firmly correct. In the eighth month there will be evil.

20. Kwân shows (how he whom it represents should be like) the worshipper who has washed his hands, but not (yet) presented his offerings, with sincerity and an appearance of dignity (commanding reverent regard).

21. Shih Ho indicates successful progress (in the condition of things which it supposes). It will be advantageous to use legal restraints.

22. Pî indicates that there should be free course (in what it denotes). There will be little advantage (however) if it be allowed to advance (and take the lead).

23. Po indicates that (in the state which it symbolizes) it will not be advantageous to make a movement in any direction whatever.

24. Fû indicates that there will be free course and progress (in what it denotes). (The subject of it) finds no one to distress him in his exits and entrances; friends come to him, and no error is committed. He will return and repeat his (proper) course. In seven

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days comes his return. There will be advantage in whatever direction movement is made.

25. Wû Wang indicates great progress and success, while there will be advantage in being firm and correct. If (its subject and his action) be not correct, he will fall into errors, and it will not be advantageous for him to move in any direction.

26. Under the conditions of Tâ *Khû* it will be advantageous to be firm and correct. (If its subjects do not seek to) enjoy his revenues in his own family (without taking service at court), there will be good fortune. It will be advantageous for him to cross the great stream.

27. I indicates that with firm correctness there will be good fortune (in what is denoted by it). We must look at what we are seeking to nourish, and by the exercise of our thoughts seek for the proper aliment.

28. Tâ Kwo suggests to us a beam that is weak. There will be advantage in moving (under its conditions) in any direction whatever; there will be success.

29. Khan, here repeated, shows the possession of sincerity, through which the mind is penetrating. Action (in accordance with this) will be of high value.

30. Lî indicates that (in regard to what it denotes) it will be advantageous to be firm and correct, and that thus there will be free course and success. Let (its subject) also nourish (a docility like that of) the cow, and there will be good fortune.

31. Hsien indicates that, on the fulfillment of the conditions inplied in it), there will be free course and success. Its advantageousness will depend on the being firm and correct, (as) in marrying a young lady. There will be good fortune.

32. Hăang indicates successful progress and no error (in what it denotes). But the advantage will come from being firm and correct; and movement in any direction whatever will be advantageous.

33. Thun indicates successful progress (in its circumstances). To a small extent it will (still) be advantageous to be firm and correct.

34. Tâ *K*wang indicates that (under the conditions which it symbolizes) it will be advantageous to be firm and correct.

35. In 3in we see a prince who secures the tranquility (of the people) presented on that account with numerous horses (by the king), and three times in a day received at interviews.

36. Ming I indicates (in the circumstances which it denotes) it will be advantageous to realize the difficulty (of the position), and maintain firm correctness.

37. For (the realization of what is taught in) *K*îâ Zăn, (or for the

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regulation of the family) what is most advantageous, is that the wife be firm and correct.

38. Khwei indicates that (notwithstanding the condition of things which it denotes), in small matters there will (still) be good success.

39. In (the state indicated by) *K*ien advantage will be found in the north-west, and the contrary in the north-east. It will be advantageous (also) to meet with the great men. (In these circumstances), with firmness and correctness, there will be good fortune.

40. In (the state indicated by) *K*ieh advantage will be found in the south-west. If no (further) operations be called for, there will be good fortune in coming back (to the old conditions). If some operations be called for, there will be good fortune in the early conducting of them.

41. In (what is denoted by) Sun, if there be sincerity (in him who employs it), there will be great good fortune; freedom from error; firmness and correctness can be maintained; and advantage in every movement that shall be made. In what shall this (sincerity in the exercise of Sun) be employed? (Even) in sacrifice two baskets of grain (though there be nothing else), may be presented.

42. Yî indicates that (in the state which it denotes) there will be advantage in every movement which shall be undertaken, that it will be advantageous (even) to cross the great stream.

43. Kwâi requires (in him who would fulfill its meaning) the exhibition (of the culprit's guilt) in the royal court, and a sincere and earnest appeal (for sympathy and support) with a consciousness of the peril (involved in cutting off the criminal). He should (also) make announcement in his own city, and show that it will not be well to have recourse at once to arms. (In this way) there will be advantage in whatever he shall go forward to.

44. Kâu shows a female who is bold and strong. It will not be good to marry (such) a female.

45. In (the state denoted by) 3hui, the king will repair to his ancestral temple. It will be advantageous (also) to meet with the great man; and then there will be progress and success, though the advantage must come through firm correctness. The use of great virtues will conduce to good fortune; and in whatever direction movement is made, it will be advantageous.

46. Shăng indicates that (under its conditions) there will be great progress and success. Seeking by (the qualities implied in it) to meet with the great man, its subject need have no anxiety. Advance to the south will be fortunate.

47. In (the condition denoted by) Khwăn there may (yet be) progress and success. For the firm and correct, the (really) great man,

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there will be good fortune. He will fall into no error. If he make speeches, his words cannot be made good.

48. (Looking at) 3ing, we think of how the site of a town may be changed, while the fashion of its wells undergo no change. The water of a well never disappears and never receives any great increase, and those who come and those who go can draw and enjoy the benefit. If the drawing have been nearly accomplished, but, before the rope has quite reached the water, the bucket is broken, this is evil.

49. (What takes place as indicated by) Ko is believed in only after it has been accomplished. There will be great progress and success. Advantage will come from being firm and correct. In that case occasion for repentance will disappear.

50. Ting gives the intimation of great progress and success.

51. Kăn gives intimation of ease and development. When (the time of) movement comes, (the subject of the hexagram) will be found looking out with apprehension, and yet smiling and talking cheerfully. When the movement comes like a crash of thunder all within a hundred Lî, he will be like the sincere worshipper who is not startled into letting go his ladle and cup of sacrificial spirits.

52. When one's resting is like that of the back, and he looses all consciousness of self ; when he walks in his courtyard, and does not see any of the persons in it there, will be no error.

53. Kien suggests to us the marriage of a young lady, and the good fortune attending it. There will be advantage in being firm and correct.

54. Kwei Mei indicates that (under the conditions which it denotes) action will be evil, and in no wise advantageous.

55. Făng intimates progress and development. When a king has reached the point (which the name denotes) there is no occasion to be anxious through fear of a change. Let him be as the sun at noon.

56. Lü intimates that (in the condition which it denotes) there may be some little attainment and progress. If the stranger or traveler be firm and correct as he ought to be, there will be good fortune.

57. Sun intimates that (under the conditions which it denotes) there will be some little attainment and progress. There will be advantage in movement onward in whatever direction. It will be advantageous (also) to see the great man.

58. Tui intimates that (under its conditions) there will be progress and attainment. But it will be advantageous to be firm and correct

59. Hwân intimates that (under its conditions) there will be progress and success. The king goes to his ancestral temple ; and it will

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be advantageous to cross the great stream. It will be advantageous to be firm and correct.

60. *Kieh* intimates that (under its conditions) there will be progress and attainment. (But) if the regulations (which it prescribes) be severe and difficult, they cannot be permanent.

61. *Kung* Fû (moves even) pigs and fish, and leads to good fortune. There will be advantage in crossing the great stream. There will be advantage in being firm and correct.

62. Hsiâo Kwo indicates that (in the circumstances which it implies) there will be progress and attainment. But it will be advantageous to be firm and correct. (What the name denotes) may be done in small affairs, but not in great affairs. (It is like) the notes that come down from a bird on the wing; to descend is better than to ascend. There will (in this way) be great good fortune.

63. *Kî* 3î intimates progress and success in small matters. There will be advantage in being firm and correct. There has been good fortune in the beginning; there may be disorder in the end.

64. Wei 3î intimates progress and success (in the circumstances which it implies). (We see) a young fox that has nearly crossed (the stream), when its tail gets immersed. There will be no advantage in any way.

It will be observed that we are reminded eight times, Nos. 5, 6, 13, 18, 26, 42, 59, and 64, when "to cross the great stream." This is supposed by some to refer to the Hoang Ho, or Yellow River, estimated to be 2,000 miles in length, flowing into the Whang-hai, or Yellow Sea.

Mr. Leggs's book contains 238 pages of appendixes, devoted to the interpretations and symbolizations of the 64 hexagrams, and those of our readers who wish to pursue the subject would do well to study the book.

RAILROAD ITEMS. The cost of railroads in the United States has been $1,000,000,000.

The number of persons employed on railroads in the United States is 1,000,000.

The average cost of constructing a mile of railroad in the United States at the present time is $30,000.

The average daily earning of an American locomotive is $100.

The longest railroad bridge span in the United States is the Cantilever span in the Poughkeepsie bridge over the Hudson, 548 feet.

A steel rail lasts, with average wear, 18 years.

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Questions and Answers.

HECTOR "THE SIXTH." Why was Hector named *The Sixth?* Our teacher says he cannot explain it. Also, how many children had Priam king of Troy? STUDENT.

These questions will have to be settled by the classics. There are two explanations to the first. They both involve genealogy. Anthon, in general, is the authority.

1. Erichthonius was the mythological son of *Vulcan and Minerva*, and expelled Amphictyon, an Attic king, from the throne of the Dardanian kingdom, and reigned instead. Erichthonius means "throne-expeller." He married Astyoche, and to them was born Tros.

2. Tros succeeded to the throne and called the kingdom Troas or Troy for himself. He married Callirhoë, daughter of Scamander, and to them were born Ilus, Assaracus, and Ganymedes.

3. Ilus succeeded to the throne, and called the kingdom Ilium, for himself. He married Eurydicë, daughter of Adrastus, and to them were born Themis and Laomedom.

4. Laomedom succeeded to the throne. He married Strymon, daughter of Scamander, and to them were born Tithonus, Lampus, Clitius, Hicetaon, Podarces (called also Priam), Hesione, and two others, whose names are not given. Hercules took the kingdom of Tros or Ilium under Laomedom, and among the prisoners was Podarces, who was ransomed by his sister Hesione. Podarces' name was changed to Priam which means "ransomed."

5. Priam was placed on the throne by Hercules. He had married Arisba, by order of his father, but on ascending the throne he was divorced from her, and married Hecuba, daughter of Dymas, the Phrygian, who, according to Homer, bore him nineteen children (*Iliad* XXIV, 616, Pope's translation). Their names were, alphabetically:

1.	Agathon,	*Iliad* 24, 312.	11.	Laocoön,	*Æneid* 2, 201.
2.	Antiphon,	" 24, 315.	12.	Laodicë,	*Iliad* 3, 165.
3.	Cassandra,	" 24, 870.	13.	Mestor,	" 24, 321.
4.	Creüsa,	*Æneid* 2, 562.	14.	Pammon,	" 24, 314.
5.	Deiphobus,	*Iliad* 24, 313.	15.	Paris,	" 24, 312.
6.	Dius,	" 24, 313.	16.	Polites,	" 24. 312.
7.	Doryclus,	" 11, 611.	17.	Polydorus,	" 20, 271.
8.	Hector,	" 24, 313.	18.	Polyxena,	*Æneid* 3, 421.
9.	Helenus,	" 24, 314.	19.	Trolius,	*Iiiad* 24, 322.
10.	Hippothoüs,	" 24, 314.			

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Hector was the eldest son, (Thomas's "Uuiv. Biog. and Myth. Dictionary, article *Hector*), and the kingdom would have succeeded to him at Priam's decease, and hence he would have been the *Sixth* king, reckoning from the expulsion of the Attic king, Amphictyon. The Trojan kings claimed to be the direct descendants from the gods, and Hector was the *Sixth* in direct line from Vulcan.

BIRTHPLACE OF HOMER. (Vol. II, p. 642.) Antipater of Sidon, according to Thomas's "Universal Biographical and Mythological Dictionary," page 1202, says "Seven cities contend for the race or origin of the wise Homer." He names the cities as "Smyrna, Chios, Colophon, Ithaca, Pylos, Argos, and Athens." These vary from those already given in your pages, Ithaca and Pylos in place of Salamis and Rhodes. OBSERVER.

AGE OF JACOB'S SONS. (Vol. VI, p. 276.) The ages of the "Twelve Patriarchs" are given slightly different in the Talmud, according to H. Polano, in his "Selections," page 137, from those in the "Testament of the Twelve." Polano's work gives them thus:

Reuben 125, Simeon 120, Levi 137, Judah 129, Issachar 122, Zebulon 114, Dan 124, Naphtali 132, Gad 125, Asher 123, Benjamin 120, and Joseph 110. Total, 1481 years; average, 123 $\frac{5}{12}$, or one year more than in the former article in average. OBSERVER.

"STILL WATERS RUN DEEP." (Vol. VI, p. 252.) This saying can be found almost in Proverbs XVIII, 4: "The words of a man's mouth *are as* deep waters." That is words have deep significance, especially ancient, unsophisticated, spontaneous; not modern arbitrary words. also, Proverbs XX, 5: "Council in the heart of man *is like* deep water." That is, human resources for help are in himself, but lay deep, and only understanding is needed to draw it up and out. Water is a very ancient emblem of truth. E. M. E., M. D.

MORNING PRAYER. Vol. VI, p. 252.) The writer did not see the "call for a morning prayer," mentioned by "ISRAEL," but here is one used in his family for many years past:

"I thank Thee, Lord, for last night's sleep;
My soul, I pray Thee, this day keep;
And if I die ere close of day,
Take Thou, my soul, O Lord, I pray." J. M. R.

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The Sum of Two Numbers is = to Their Product.

(Vol. v, p. 206; Vol. vi. p. 241.)

Let $x =$ one of the numbers, and $y =$ the other; and $a =$ their algebraic sum = to their product. Supposing that the numbers are different; then, from the conditions, we have $x + y = a$, and $xy = a$.

Solving, we have $x = \frac{a+\sqrt{a^2-4a}}{2}$, and $y = \frac{a-\sqrt{a^2-4a}}{2}$.

1. From these we see that every negative value of a will give real and unequal values of x and y, one positive and the other negative. Hence there is an *infinite* number of *numbers*, one positive and one negative, *whose sum* is equal to *their product.*

2. If $a = 0$, both numbers become 0, and their sum and product are 0.

3. If a is positive and less than 4, both values will be imaginary. Hence there are *no numbers* whose product is between 0 and 4 which can have their *sum* equal to their *product.*

4. If $a = 4$, the numbers become 2 and 2. Their *sum* is 4 and their *product* is 4, but these are equal and excluded by the enunciation of the problem.

5. If a is positive and greater than 4, the values will be real and unequal, and both positive. Hence there is an *infinite nnmber* of numbers *both positive* whose *sum* and *product* are equal.

6. In order that these numbers be commensurable, a^2-4a must be a perfect square, and there will be an *infinite* number of *such* numbers. For instance:

If $a = -\frac{1}{2}$, $x = \frac{1}{2}$ and $y = -1$.
If $a = -\frac{1}{8}$, $x = \frac{1}{8}$ and $y = -\frac{1}{2}$.
If $a = \frac{25}{8}$, $x = \frac{5}{2}$ and $y = \frac{5}{8}$.
If $a = \frac{9}{2}$, $x = 3$ and $y = \frac{3}{2}$, etc.

7. In order that both numbers be *whole* numbers a must be a whole number; for the *product* of two whole numbers cannot be a irreducible fraction nor incommensurable. Moreover, $\sqrt{a^2-4a}$ must be a whole number; for an incommensurable number or irreducible fraction added to or subtracted from a whole number cannot give a whole number, and the result divided by 2 could not be entire.

But $\sqrt{a^2-4a}$, a being a whole number, *cannot* be a whole number. Hence no two *whole* numbers, either equal or unequal, except 2 and 2,

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can have their sum equal to their product. This can be easily proved, thus, *N* being a whole number,

$1 + N > 1 \times N$ or N.

$2 + N < 2$ N, unless $N = 2$, when $2 + N = 2$ N.

$3 + N < 3$ N, if *N* be greater than 2.

$4 + N < 4$ N, if *N* be greater than 2.

$5 + N < 5$ N, if *N* be greater than 2.

6 etc.

$M + N < MN$. That is, the product of *no two whole numbers*, one of which is greater than 2, can have *their sum* equal to *their product.*

G. H. HARVILL, B. A., Ada, La.

THE RIVER SAMBATYON. (Vol. V, p. 211.) According to the book on the "New World" entitled *Holam Hadas*, printed at Venice, the author says "the river Sambatyon is on the borders of India Upper, beyond the river Ganges, which is in our language called Gozan, as declared in II Kings XVII, 6: 'about Halah and Habah, mountains of Gozan and Media.'"

The word Sambatyon means the "the Sabbatical" river. It is said in the Talmud that this river flows during the secular six days of the week and drys up on the Sabbath. Josephus says it is the reverse:

"It runs in the middle between Arcea, and belonging to Agrippa's kingdom and Raphanea. It hath somewhat very peculiar in it; for when it runs, its current is strong and has plenty of water; after which its springs fail for six days altogether, and leave its channel dry, as any one may see; after which days it runs on the seventh day as it did before. and as though it had undergone no change at all; it hath also been observed to keep this order perpetually and exactly; whence it is that t ey call it the Sabbatic River, that name being taken from the the sacred seventh day among the Jews."—*Wars of the Jews*, VII, V, 1.

According to Pliny (*Nat. Hist.* XXXI, 11) it ran perpetually on *six* days and rested on the *seventh.*

THE FIRST SEVENTH SON. (Vol. VI, p. 316.) It has been said that the first *seventh son* recorded in the Bible is *Tiras* son of Japhet (Gen. X, 2.) Others say it is *Diklah* son of Joktan (Gen. X, 27.) Others say that only sons' names were recorded in genealogy and that daughters were omitted; such claim *Jiblaph* son of Nahor (Gen XXII, 22). While one says it is *Massa*, son of Ishmael (Gen. XXV, 14).

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QUESTIONS.

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1. Whose translation of the *Iliad* and *Odyssey* is the most copious with notes, explanations, etc.? LEON.

2. Who was the first man, according to the Chinese who antedate the Hebrew Scriptures by many thousand years. SEARCHER.

3. What is the meaning of the two French names *Quatremère* and *Quatrefages*, two authors? LEWELLYN.

4. Is there any allusion to Jesus of Nazareth in the works of Flavius Josephus? WELLINGTON HOWARD.

5. How many difierent names of Gautama Buddha? Several authors before me give each a different name. OBSERVER.

6. What is the explanation of the four different reports mentioned in the poem of Job (1, 14, 16, 17, 18), as having been brought to that patriarch by four different messengers each claiming, "I only am escaped to tell thee." X.

7. How many are meant by the expression "nearly ten thousand strong," which is so often heard? B. C.

8. Several years ago a book was published anonymously in New York entitled *Hyponoia* with remarks upon the *Parousia*. What is the meaning of these words? NOAH.

10. A person traveling in the West cannot but observe the many towns and cities beginning with O. For instance: Oconto, Oklahoma, Omaha, Onawa, Osceola, Oskaloosa, Oshkosh, Ottawa, Ottumwa, Owatonna, Owasso, etc. Is there a preponderance of such names? Are they of Indian origin? LOGOS.

11. Whence come the phrase "poor as Job's turkey"? E. O.

12. Homer's *Iliad* II, 790, and Virgil's *Æneid* III, 106, say Crete had 100 cities. Homer's *Odyssey* XIX. 197, says 90 cities. How is the discrepancy explained READER.

13. What is the explanation of the detention of Ulysses in the Island of Ogygia by Calypso, the *Concealer?* Also, how Ulysses was charmed in the Island of Ææa by Circe, the *Ring?* G. S. C.

14. What philosopher defined man to be "a two-legged animal without feathers"? L. L. W.

15. Why does Edward Young, in his "Night Thoughts," IV, 827, call "Truth, eldest *daughter* of the Deity"? Jesus says, "I am the way, the truth, and the life" (John XIV, 14). JAMES.

16. A medal was struck at Rome to commemorate the massacre of St. Bartholomew. One account says it bore the legend "*Hugonotorum slrages.*" Another account says it was "*Ugonottorum strages*, 1572." What is the English of these inscriptions? J. O. E.

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

" *A phitosopher resteth not, unless he have the center of a thing.*"—Law.

VOL. VI. AUGUST, 1889. No. 8.

Waste-Basket of Words.

[From Journal of American Folk-Lore, Vol. I, No. IV, 1889.]

Buttermunk.—Bittern. South Berwick, Me. " Moäst loike a butter-bump." Tennyson, " Northern Farmer." — W. A. Hayes, Cambridge, Mass.

Coast.—The word was common in my boyhood which was passed in Wayne and the neighboring counties in New York State, although the sense was usually the riding over fences, etc., upon the hard crust formed upon the surface of the snow. " Sliding down hill " was the term assigned to riding in or upon the highway. No one taught us the distinctions, yet they were generally observed. The people were second and third generations from New England. — A. S. Roe, Worcester, Mass.

The word appears to have been a local term of the neighborhood of Boston.--W. W. Newell.

In Toronto, Canada, *slide* or *ride* is said to be the common term, though *coast* is sometime heard.—A. F. Chamberlain, Toronto.

Diddledees.—This seems a curious instance of a strictly local word. At Hyannis, in my boyhood, it was the universal name for the fallen pine needles that carpet the ground in the woods. They were gathered by the cart-load, and largely used for kindlings. I never heard ths word outside the village, and persons in the adjacent towns did not know what it meant.—Sylvester Baxter, Boston.

Dreen.—To this day, in Wayne County, N. Y., this form is more common than *drain*, both as noun and verb.—A. S. Roe.

Gas.—This word, considered as slang, has not been accepted by lexicographers. In the United States it is much used in the sense of

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idle talk, windy eloquence, a signification indicated by a supposed derivation from *gas*, air; as we say *gas-bag*. But an older meaning of our word is *boast*, or brag. "That is all *gas*;" it's nothing but bombast; a *gassy* man, one who boasts of his prowess; "none of your *gassing*," none of your nonsense. In England the use is more idiomatic. Holten, in his "Slang Dictionary," London, 1874, has: "Gas, to give off superfluous conceit, to bounce or brag; 'his game is Gas.' To give a person gas is to scold him or give him a good beating; synonymous with "to give him Jessie." The word doubtless comes from the mediæval French *gab*, *gas*, mockery, raillery,. "Ce n'est pas *gas*," it is not a joke. It is also used in the sense of insult or derision: to say *gas* to any one; "childreu will give you *gas*," will mock you, as a blind man in the street (Godefroi, Dictionary). Hence the English word, which has nothing to do with *gas*, an aeriform fluid, a word made up by Von Helmont, in the 17th century.—W. W. Newell.

To-noon.—In my boyhood, at Hyannis, Cape Cod, it was common to say *to-noon* in the same sense in which *to-night* is used. For instance, "Where are you going *to-noon?*" I remember the astonishment expressed by some friends from Boston at my using it, and that was the first time I learned that the word was not as correct as *to-night*. That was in 1865 or 1866, and I do not know whether the expression is still in use in that part of the world.—Sylvester Baxter.

KING SOLOMON'S CODE OF SIX PRINCIPLES FOR JUSTICE. (Vol. VI, p. 316.) Rev. Moses Edrehi, in "The Book of Miracles," page 278, says that the extraordinary and magnificent throne of Solomon was said to have been built by the spirit of prophecy; that what is said in I Kings is explained by Rabbi Aha to be the six steps to Solomon's throne; and on that magnificent throne he sat when he administered justice to the people; and on the six steps to the throne were written the six following verses, which were concerning justice:

First step—"Thou shalt not wrest judgment."
Second step—"Thou shalt not respect persons."
Third step—"Neither take a gift."
Fourth step—"Thou shalt not plant thee a grove."
Fifth step—"Neither shalt thou set thee up any image, which the Lord thy God hateth."
Sixth step—Thou shalt not sacrifice unto the Lord thy God any bullock or sheep, wherein is blemish.—*Deut.* XVI, 19.

These six verses were written on the front of the steps; and when the king ascended the throne he repeated the first verse on the first step, the second on the second step, the third on the third, and so on.

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EPITAPH ON DIOPHANTUS. The following epitaph on Diophantus is found in "Mathematical Questions and Solutions from the *Educational Times*," Vol. XLIX, 1888. Will some one give an English translation for those who cannot read the Latin:

Hic Diophantus habet tumulum, qui tempora vitæ
Illius mira denotat arte tibi.
Egit sextantem juvenis; lanugine malas
Vestire hinc coepit parte duodecima.

Septante uxori post hæc sociatur, et anno
Formosus quinto nascitur inde puer.

Semissem ætatis postquam attigit ille paternæ
Infelix subita morte peremptus obit.
Quatour æstates genitor lugere superstes
Cogitur: hinc annos illius assequere. H.

TRANSLATION.

"Here Diophantus has a tomb, who marks out for you with wonderful art the periods of his life. A youth he passed the sixth part; then he begins to cover his cheeks with down during a twelfth part. A seventh part after this he is united to a wife, and then in the fifth year a beautiful boy is born. After the latter has attained half of his father's age, unhappy he perishes, carried off by sudden death. Four summers the surviving father is forced to mourn; from this find out his years."

SOLUTION.

Let x = Diophantus's age.

$\frac{x}{6}$ = egit juvenis.

$\frac{x}{12}$ = lanugine malas, etc.

$\frac{x}{7}$ = septante post haec.

5 years = nascitur puer.

$\frac{x}{2}$ = semissis aetatis paternae.

4 years = genitor lugere, etc.

$$\frac{x}{6} + \frac{x}{12} + \frac{x}{7} + 5 + \frac{x}{2} + 4 = x$$

$$14x + 7x + 12x + 420 + 42x + 336 = 84x$$

$$9x = 756$$

$$x = 84$$ M. F. K.

The time in which Diophantus lived is in some doubt. Different writers place it between B. C. 200 and A. D. 400. He was ranked with Archimedes, Euclid, and Pythagoras as a mathematician. He wrote a work in thirteen books entitled "Arithmetical Books." Six of these are extant and embrace what is now known as Diophantine analysis.

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The first traces of the science of algebra is found in his works. He also wrote a work on "Polygonal Numbers," now extant, and cites another on "Corollaries."

SOLUTION OF PROBLEM. (Vol. VI, p. 235.) A man desires to reach home exactly at 12 o'clock noon. If he travels 10 miles an hour, he arrive home 2 hours too soon; but if he travels 6 miles an hour, he arrives home 2 hours to late. How far is he from home?

C. C.

Let x = number of miles from home; then $x \div 10 + 2$ = number of hours to go home, and $x \div 6 - 2$ = numbers of hours to go home.

$(x \div 10 + 2) = (x \div 6 - 2)$. $6x + 120x = 10x + 120x$. $4x = 240$. $x = 60$ miles from home. GEO. A. SANBORN, Rochester, N. H.

GOLDSMITH A PLAGIARIST. "When lovely woman stoops to folly." "In this age of plagiarism-hunting it does not seem to be generally known that Oliver Goldsmith, strange compound of good and evil, who 'wrote like an angel but talked like poor poll,' was a plagiarist of the strongest brand. We will hope it was only in starving penny-a-lining days that the bard sank so low, winning and wearing laurels not his own without a qualm. Perhaps what has endeared him to us is his touching little song — (did he make it in those wild wandering days between 1756 and 1759?) —

When lovely woman stoops to folly,
And finds to late that men betray,
What charm can sooth her melancholy—
What art can wash her guilt away?

The only art her guilt to cover,
To hide her shame from every eye,
To give repentance to her lover,
And wring his bosom—is to die.

But it was Segur, an obscure French poet in the early 18th century, who really owns those laurels and wrote those lines, and has probably been turning in his grave ever since Goldsmith robbed him. A copy of Segur, printed in Paris in 1719, contains the follow:

Lorsqu'une femme, apres trop de tendresse,
D'un homme sent le trashison,
Comment, pour cette si douce faiblesse,
Pent-elle trouver une guévison?

Le seul remede qu'elle pent ressentir,
Le seul revanche pour sou tort,
Pour faire trop tard l'amant repentir,
Hélas! trop tard—est la mort.

Ah? Brigand de Goldsmith! It is a neat bit of translation; but why didst thou not acknowledge the victim."—*St. James Gaxette.*

L. H. A., Chicago, Ill.

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Magic Squares.

1.

1888.

457	485	483	463
479	467	469	473
471	475	477	465
481	461	459	487

2.

1889.

470	470½	473	475½
472½	476	469½	471
471½	469	474½	474
475	473½	472	468½

3.

22	862	202	802
682	322	502	382
742	142	922	82
442	562	262	622

4.

862	202
322	502

5.

485	483
467	469

The magic square No. *1* is that printed on back of your index, Vol. V, for *1888*, but it is not a perfect one, as it lacks some of the properties possessed by a perfect one. The center diagonals, the rows, and the columns add 1888, it is true, likewise the four corners, and *some* of the square groups of four numbers. But in a *perfect* square, (with root 4) all the groups, and every diagonal of four numbers (supposing the entire square repeated on all sides), should add 1888. Now No. *3* is a perfect square. For instance, No. *4* is one group from it and adds 1888. But the corresponding group No. *5* from No. *1* does not add 1888. In the language of some writers these more perfect ones are said to be "magic," "four-ply," and "nasik;" *magic* means

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that the rows, columns, and center diagonals add and make the number; *four-ply* is when all groups of four add and make the number; and *nasik* when *all* diagonals add and make the number. Squares cannot be made for odd numbers when root is 4. Fractions would have to be inserted as in No. 2; but that is not allowable, as a magic square must consist of integers.

The very curious square with 64 numbers, printed in the January (1888) NOTES AND QUERIES, is interesting as it happens to illustrate the knight's tour on the chess-board. But regarded simply as a magic square it is far from a perfect one—not even the center diagonals summing up the number. Nor is it the *greatest*. For when the principle of making magic squares is understood, they can be made of any size desired. T. S. BARRETT, London, Eng.

PHILIP AND FELIPE. (Vol. VI, p. 236.) The *Herald*, of Toronto, contains the folling article on the spelling of the name Philip, and its Spanish form Felipe :

Notes and Queries [Manchester, N. H.], asks "why the Spanish spel Philip *Felipe?*" We *wud* like to no why they have 'Felipe' insted of 'Fil.' They use *f* for *ph* generaly, a change bro't with other changes by reform in Sp. orthog. 60 or 70 years ago. Portugal stil adheres to *ph* for *f*—Philippe—as stupidly as we. In Italian it is Filippo. Use of *ph* for *f* never prevaild in Italian. It began to gro in pre-Italian, or latter days, but died out. About the first cent. pedantic Greeklings, not accepting Latin F as equivalent to Greek *f* (named *fi*) tho not of quite same shape, began to "sho off" by using *ph*, a way of representing this sound by the Greeks before they aded the new leter *fi* to their alfabet. That this had spred a litl in popular favor is probabl, as in some scribling on walls of Pompeii that we hav seen, necessarily ritn in or before first cent., *ph* is found for *f*. Suthern Italy was calld Magna Grecia, as setld by Greek colonis. Tho there it is not found in classic Latin. Filip means lover (*filos*) of the hors (*hippos*) which explains *f*, singl *l*, doubl *p* of Italian. It is remarkabl how in Italian names, speld by them with *f*, we insist ofn on the retrograde change to *ph*. Thus we spel their great painter as Raphael while on his tomb in the Pantheon at Rome and thruout Italian literature it is ever speld with *f*.

SURVIVOR OF THE HANNIBAL HAMLIN FAMILY. (Vol. IV, p. 266.) The statement that Hannibal Hamlin "is the only survivor of the family" is a mistake. The sister of Hannibal Hamlin, Ann (Hamlin) Browne, now lives in Paris, Maine, a widow lady, highly respected and esteemed. CALCHAS.

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QUESTIONS and ANSWERS.

JESUS AND JOSEPHUS. (Vol. VI, p. 332.) This question should be answered before it is asked three times more. The edition of Josephus's works by William Whiston, Baltimore, 1832, contains the following in "Antiquities of the Jews," XVIII, III, 3, in reference to Jesus:

"Now there was about this time Jesus, a wise man, if it be lawful to call him a man, for he was a doer of wonderful works, a teacher of such men as receive the truth with pleasure. He drew over to him both many of the Jews, and many of the Gentiles. He was [the] Christ. And when Pilate, at the suggestion of the principal men amongst us, had condemned him to the cross, those that loved him at the first did not forsake him; for he appeared to them alive again the third day, as the divine prophets had foretold these and ten thousand other wonderful things concerning him. And the tribe of Christians, so named from him, are not extinct to this day."

With this we will print the same reference to him from the edition of Josephus's works, London, 1656:

"At that time was Jesus, a wise man, if it be lawful to call him a man. For he was a performer of divers admirable works, and the instructor of those who willingly entertain the truth; and he drew unto him divers Jews and Greeks to be his followers. This was Christ, who being accused by the Princes of our nation before Pilate, and afterward condemned to the cross by him; yet did not those who followed him from the beginning, forbear to love him for the ignominies of his death. For he appeared to them alive the third day after, according as the Divine Prophets had before testified the same, and divers other wonderful things of him; and from that time forward the race of the Christians, who have derived their name from him, hath never ceased."

This famous allusion to Jesus first appeared in the time of Eusebius, who died about A. D. 340. It is claimed to be a settled fact Josephus did not write the passage as we have it.

PWAN KOO, THE FIRST MAN. (Vol. VI, p. 332.) Hung-su-tseuen, the Chinese historian, says God is the one common parent and from of old there was but one family, and the first man was *Pwan koo*, and down through three dynasties both prince and people together honored one heaven; one feeling pervaded heaven and men.

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THE FIRST SAVIOUR MENTIONED IN THE BIBLE. (Vol. VI, p. 300.) The first *Saviour* mentioned as such in King James's version is in II Samuel XXII, 3 : "*He is* my shield, and the horn of my salvation, my high tower, and my refuge, and my saviour." But the question of "LOGOS" does not limit it to one version; hence if one will examine the Douay Version, Genesis XLI, 45, he will find that it reads:

"And he turned his name, and called him in the Egyptian tongue the saviour of the world."

"The saviour of the world" is rendered from the Latin Vulgate, *salvator mundi;* this from the Septuagint, *Psonthomphanéch;* this from the Hebrew, *Tsaphenath Paaneäch.* This is the name that Pharaoh gave to Joseph.

The Rabbins interpret Zaphnath-paaneah as Hebrew, in the sense of "The revealer of a secret." Josephus, in "Antiquities" II, 6, 1, says that Joseph "enjoyed great honors from the king, who called him *Psthom Phanech,* out of regard for his prodigious degree of wisdom; for that name denotes *the revealer of secrets.* Theodoret follows Josephus. Isidore and Jerome adopt the interpretation, "the saviour of the world." Jablonski proposes as the Coptic of the Egyptian original *psot m-phenet,* "the preserver of the age." The Hebrew form is *Z-ph-a-th P-ʿ-n-ch,* and may well be rendered "food of life." The Septuagint makes it *Psonthomphanéch,* meaning "he who gives joy to the world," from which the Vulgate rendered it "salvator mundi."

"WITNESS MY HAND." (Vol. I, p. 46.) Bouvier's "Law Dictionary" says: "Formerly the hand was considered as the symbol of good faith and come contracts derive their names from the fact that the hand was used in making them." So at the present time people sometimes shake hands on the completion of a contract or wager as a pledge of good faith. I have also read somewhere that in former times a grantor who had no seal nor coat-of-arms, smeared his hand with ink and placed it on the indenture under the words *Witnes my hand.* In modern times it has been declared by statute, at l east in Illinois, that any kind of scroll or mark printed or written at the close of the signature, will be considered a good and sufficient seal, but the grantor is still required to set his hand to the indenture and make his mark.

J. G. GHOLSON, Broughton, Ill.

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CORRESPONDENCE WITH THE LUNARIANS. (Vol. VI, p. 316.) In 1800 there was published in London a small work entitled "Some Account of an Existing Correspondence now Carrying on between the Inhabitants of the Moon and the Natives of this Country." It was a burlesque, being correspondence between Ezekiel Gobble & Co., of *New City*, in the Moon, 20th July, 1796, and General Snap and Colonel Trap, of *London*, 13th January, 1800.

Gruithuisen, in a conversation with the great continental astronomer Gauss, says the Edinburgh *New Philosophical Journal*, October, 1826, page 390, after describing the regular figures he had discovered in the moon, spoke of the possibility of correspondence with the lunar inhabitants. He brought to Gauss's recollection the idea he had communicated several years ago to Zimmerman. Gauss answered, that the plan of erecting a geometrical figure on the plains of Siberia corresponded with his opinion, because according to his view, a correspondence with the inhabitants of the moon could only be begun by means of such mathematical contemplations and ideas which we and they must have in common. Were the lunarians to recognize such a figure, erected on an immense scale, as a signal of correspondence, they might perhaps erect a similar one in reply. Rev. Thomas Dick, of Scotland, suggested a trial of the scheme by erecting a triangle or ellipse of many miles extent, in Siberia or some other country, which might at the same time serve as an accommodation to thousands of inhabitants, who are now roaming the deserts like the beasts of the forests, and then have astronomers watch for a response from the lunarians.

Rev. John Wilkins, in 1802, published in London, "A Discourse on the Possibility of a Passage to the Moon," and tending to prove that our satellite is inhabited.

"FAMILIARITY BREEDS CONTEMPT." (Vol. VI, p. 252.) Rev. Leigh Hunt, author of "The Dairyman's Daughter," once in a letter of advice wrote the maxim, "Familiarity breeds contempt." It may be older, however. A. WILDER.

IZZARD AND ZED. (Vol. VI, p. 252.) Z was named *izzard* in the last and preceding centuries. It probably was a corruption of *S*-hard. *Zed*, from *Zeta*, is English, and we find it in Shakespeare. I think it is still used, as I have heard the same. A. WILDER.

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CWENILA. (Vol. VI, p. 316.) Cwenila is the ancient god of the Mexicans. The image of it is very ancient. Kircher has a plate of it in his "Œdipus Ægypticus," taken from a manuscript in the Vatican Library. It is described as follows: The head is square, with radiant eyes; the ears are those of a wolf; the mouth is toothed, and is supposed to resemble the Leviathan's, whose "teeth *are* terrible round about" (Job XLI, 14). The nose is the crescent moon; the chin is a solar circle, under which are three dots, and beneath these a symbol resembling a gothic letter M. He has six hands, four on the right and two on the left; two hands hold vases; under the left ear is a cock's head; on his left arm are three rings. Various heads of animals surround him. His feet are those of an elephant; the all-seeing eye is under the right eye, and a man's head with tongue out under the left; under the all-seeing eye is a cat; under the man's head is a serpent-headed sword sceptre. In many respect it corresponds with the ancient Hindu figure. It is full of symbology.

HOW MANY HAVE ENTERED PARADISE ALIVE? This questions has raised a discussion in our Sunday school, and I send it to N. AND Q. for an answer. TEACHER.

There is a difference of opinion as to the number. Christians say Enoch (Gen. v, 24), Elijah (II Kings II, 11), Jesus (Luke XXIV, 21). Others include John the apostle (John XXI, 23). Others, yet, include Moses (Luke IX, 30).

The Talmud says (Derech Eretz Zuta I) *nine* have entered alive into paradise, and they are:

"Enoch, the son of Jared; Elijah, the Tishbite; the Messiah; Eliezer, the servant of Abraham; Hiram, king of Tyre; Ebed Melech, the Ethiopian; Jabez, the son of Rabbi Yehuda the prince; Bathia, the daughter of Pharaoh; and Sarah, the daughter of Asher."

VOTING IN SECRET SOCIETIES. (Vol. VI, 300.) The manner of voting in secret societies is usually conducted by four methods, thus: Aye and nay, raising of the right hand pro and con, calling the roll of membership, and ball ballots. The latter varies in that some use white and black balls, while others use balls and cubes. Applicants are usually elected or rejected, dismissed, suspended, or expelled by the ball ballot. The other business is conducted by the other modes, as their constitutions may direct.

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THE GREEK MONTHS. (Vol. VI, p. 316.) The names of the Greek months given in Seffrarth's "Chronology," page 167, are here given:

Gamelion,	Apellæus,	4th December.
Anthesterion,	Andynæus,	3d January.
Elaphebolion,	Peritius,	2d February.
Munychion,	Dystrus,	4th March.
Thargelion,	Xanthicus,	3d April.
Sciroph orion,	Artemisius,	3d May.
Hekatombæon,	Dæsius,	2d June.
Metageitnion,	Panemus,	2d July.
Boedomion,	Lous,	1st August.
Pyanepsion,	Gorpiæus,	31st August.
Mæmacterion,	Hyperberetæus,	30th September.
Posedion,	Dius,	30th October.
5 Epagomenoi,	5 Epagomenoi,	29th November.

THE FAMOUS "WHEEL QUESTION." (Vol. VI, p. 316.) This question was proposed in the *Scientific American*, in 1868:

"How many revolutions upon its own axis, will a wheel make in rolling once around a fixed wheel of the same size?"

The question brought to the editor of that paper many replies all claiming to have solved it. Yet the replies were about equally divided as to the number of revolutions, one part claiming *one* revolution and the other *two* revolutions. So much interest was manifested in it that Munn & Co. published *The Wheel*, June, 1868. It contains 72 pages, giving many of the solutions, illustrated by many diagrams.

RE-INCARNATION. What persons besides Pythagoras and Jesus have claimed to be reïncarnations of some previous spirit? W.

This question involves the doctrine of metempsychosis, or transmigration of souls. Metempsychosis is the ensouling of the spirit, so that it may be developed in a material sphere. Metasomatosis is the migration of the soul from body to body, as from man to man, or animal to animal. Palingenesia is regeneration, or a new birth.

The claims of Jesus, as set forth in Scripture, are familiar to all. He distinctly says of John the Baptist, "this is Elias that was to come." (Matt. XI, 14; Mal. IV, 5).

Pythagoras believed in the doctrine, taught it, and claimed to remember when he was himself no other than *Euphorbus*, who was in the Trojan war. The following is taken from Ovid's *Metamorphoses*, book XV, where Pythagoras is represented as relating his experiences:

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"Our souls are not sublect to death; but, leaving their former seats, are received into different habitations, and renew life in other forms. Even I, (for I remember it well), who declare these truths, was, in the time of the Trojan war, Euphorbus, son of Panthous; and and bore in my opposed breast the heavy spear of the yonnger son of Atreus. I lately recollect the buckler, which I wore upon my left arm, as I saw it hanging in the temple of Juno at Argos, where Abas formerly reigned. All things are thus but altered; nothing dies."

The Welsh Druid Taliesin always claimed that he himself was the reïncarnation of a former inhabitan of this earth.

FLEMISH FOLK-LORE (Vol VI, p. 250). THE PHŒNIX (Vol. VI, p. 298.) I have been much interested in many articles discussed in your pages, especially in some of the semi-mythological subjects such as the Golden Fleece, The Phœnix, Folk-Lore, etc. I desire to add a little more matter to the two latter subjects as here referred to. Anthon's "Classical Dictionary," p. 1054, has some information that in the manner of finding the Great Platonic Year, slightly varies from the folk-lore table. I will give what he says:

The of this fable [The Phœnix] is evidently astronomical, and the following ingenious explanation has been given by Marcoz. He assumes as the basis of his remarks the fragment of Hesiod preserved by Plutarch in his treatise *De Oraculorum Defectu.*

"The noisy crow lives nine generations of men who are in the bloom of years; the stag attains the age of four crows; the raven, in its turn, equals the stag's in length of days; while the phœnix lives nine ravens. We nymphs, fair of tresses, daughters of Jove, the ægis-bearer, attain to the age of ten phœnixes."

The whole computation turns upon the meaning of the term *generation.* Marcoz takes the moon for his guide; and as this luminary ceases, like man to exist, only, like him, again to arise, the period of its revolution becomes the standard required. Then $27\frac{1}{3}$ days converted into $27\frac{1}{3}$ years, give the measure of a generation among men. Reducing this, in order to make the analogy with the moon as complete as possible, he gives $26\frac{2}{3}$ years as the result. The computation is as follows:

9 generations of men, of the life of a crow, make	234 + 6 = 240
4 lives of the crow, or that of a stag, make . .	960
3 lives of a stag, or that of a raven, make . . .	2,880
9 lives of the raven, or that of the phœnix, make .	25,920

This period of 25,920 years is precisely the duration of the Great

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year of the fixed stars, having for its element exactly 50″, the annual precession of the equinoxes. From this computation also we shall be enabled to perceive how 50″, covverted into years, and multiplied by 1+2+3+4, that is by 10, gave the Egyptians 500 years as the duration of the phœnix. These numbers, 1+2+3+4, indicate that the 50″, converted into years, traverse su cessively the four quarters of ecliptic, in order to form the Great Year, the astronomical duration of the life of the phœnix.—*Macoz's Salar Astronomy of Hipparchus.*

JOHN JONHSON.

MEANING OF PISCATAQUOG. (Vol. V, p. 96, 141; VI, 230.) Referring to the meaning of Piscataquog as applied to the New Hampshire river, the Abbé Maurault says it comes from the Abenakio word "Pekata," signifying "gloomy." STEPHEN BERRY.

WATER RISING BEFORE A DROUTH. (Vol. II, p. 368.) I have a cistern dug nine feet in earth and then fourteen feet in solid rock. Not a drop of water to my knowledge ever entered this cistern through the rock until toward the close of the great drouth in 1887. I had been hauling water from a creek and using it out of the barrel. The cistern hcd been cleaned out preparatory to a rain. A short time before the termination of the drouth I concluded to empty a barrel of water into the cistern, and to my astonishment I found already about a barrel of good water, though not quite soft, in the basin at the bottom of the cistern. I considered this so nearly a miracle that I hailed a couple of passing neighbors, and had them taste the water and witness the wonder.

As to the explanation it is my opinion that there at least exists, at times, an electrical affinity or attraction between the waters under the earth and those above it, that causes the former to rise and meet the latter, as in the case of water-spouts at sea. That an electric current accompauies streams of water passing through the ground is proved by the pulling down of the divining-rod in the hands of the "water-witch," a fact of which the most skeptical may convince themselves, if they will find a stream large enough and close enough to the ground. as I did at Elizabethtown, Ill., where a stream as large as a barrel runs under the road and empties into the Ohio, near at hand.

"There are more things in heaven and earth, Horatio,
Then are dreamt of in your philosophy."

J. G. GHOLSON, Broughton, Ill.

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ISAIAH THOMAS—UNITED STATES OF COLUMBIA. (Vol. VI, p. 11.) I suppose that Isaiah Thomas was moved and inspired with the sentiments current at the time of his publications. Up to 1791, American Independence was the foremost sentiment. Next came the sentiment of Union. Mr. Thomas was a strenuous Federalist. About that time it was felt that the country ought to have a name of its own., in place of one that it shared with the whole Western continent. Mr. Thomas therefore placed the name of Columbia on his publications, in the hope to lead public sentiment to fix and crystallize upon it. I have seen the name, "United States of Columbia," on the title-page of one of his books. It did not succeed, but to the contrary, at the present time, only a resident of the United States is recognized in Europe as an "American." A. WILDER.

THE GREAT EASTERN AND NOAH'S ARK. (Vol. VI, p. 268.) The dimensions of the "Great Eastern" are: Total length, 692 feet; breadth of beam, 83 feet; depth, 68 feet. The dimensions of the Ark were: Length, 300 cubits; breadth, 50 cubits; depth, 30 cubits. The Ark was therefore about 550 feet in length; 91⅔ feet in breadth; and 55 feet in depth; the cubit being 22 inches. As compared with the Ark, the Great Eastern is 142 feet longer, 8⅔ narrower, and 13 feet deeper. MRS. J. T. GEORGE, Chicago, Ill.

JOHNSWORT. (Vol. VI, p. 68.) I think the name of the herb alluded to derives it name from St. John, as it is also called St. John's wort, its botanical name being *Hypericum*; probably so called because its leaves were formerly applied to fresh wounds which they were supposed to heal. MRS. J. T. GEORGE.

"POWWOWING." (Vol. VI, p. 252.) A priest or conjurer among the North Americans is called a "Powwow." Also, conjuration performed for the cure of diseases, and other purposes, attended with great noise and confusion, and often with dancing. Hence a noisy assembly, or frolic. "Powwowing" has most probably originated from the Indian word. MRS. J. T. GEORGE.

X'S ON BEER CASKS. (Vol. VI, p. 252.) The X on beer casks indicates beer which had to pay ten shillings duty, and hence it came to mean beer of a given quality. Two or the crosses are mere trademarks, intended to convey the notion of twice or thrice as strong as that which pays ten shillings duty. MRS. J. T. GEORGE.

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THE ERA E. M. (Vol. V, p. 148 ; VI, p. 263.) The liberal paper called *Lucifer* has the following in reference to the era E. M. :

"We date from the first of January, 1601. This era is called the Era of Man to distinguish it from the theological epoch that preceded it. In that epoch the earth was supposed to be flat, the sun was its attendant light revolving about it. Above was heaven where God ruled supreme over all potentates and powers ; on earth ruled the Pope as the vicegerent of God ; below was the kingdom of the Devil, Hell. So taught the Bible. Then came the New Astronomy, the astronomy of Copernicus, Galileo, and Bruno. It demonstrated that the earth is a globe revolving about the sun ; that the stars are worlds and suns ; that there is no "up" and "down" in space. Bruno sealed his devotion to the new truth with his life on the 17th day of February, 1600. During the 17th century Grotius wrote the first work on international law." T. S. B.

LOUD-VOICED PERSONAGES. (Vol. VI, p. 268.) I will suggest several pretty loud-voiced personages, to select from. Stentor of the *Iliad* (Bk. v, lines 786-789) had a voice louder than fifty men. Then the angel of the Apocalypse who cried "as *when* a lion roareth, and when he had cried, seveu thunders uttered their voices." If any thing can beat that it must be the trump of the archangel calling up the dead. A. W.

LUXOR, (EGYPT). (Vol. VI, p. 284.) Luxor does not mean "more light," but "the palaces" (el-kusr), so called from the temple erected there by Amundoh III and Ramses II. Also called Hecatompylos on account of its hundred gates, and Diospolis as being sacred to Jupiter. In the time of its splendor (1600-800 B. C.) it is said to have extended about 33 miles. Thebes was ruined by Cambyses king of Persia, 525 B. C., and by the foundation of Alexandria, 332 B. C. It rebelled and was taken by Ptolemy Lathyrus 86 B. C., and few traces of it were seen in the age of Juvenal. After centuries of neglect, it has been greatly visited since the explorations of Belzoni, in 1817. MRS. L. T. GEORGE.

GENERAL ORMSBY MCKNIGHT MITCHEL'S NAME SPELLED WITH ONE L. (Vol. VI, p. 284.) I have six biographical sketches of Gen. Mitchel and in none of them is his name spelled with two l's.
MRS. J. T. GEORGE.

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QUESTIONS.

1. *a.* Why does Father Time in the symbol always carry a scythe?
b. Did the ancient Greeks really sound the initial letter in the pronunciation of such names as Mnemosyne, Ptolemy, Tmolus, Tlepolemus, Psammentius, Psophis, etc.
c. What gave the name to certain properties of magic squares used on page 312, current volume; it is not in Webster.
d. Who wrote the books published by the title of "! ! !" and also, "?"? and what is the character of each book?
e. When did the Julian Period begin, and why?
f. Was Alexander Selkirkand Robinson Crusoe one and the same person in Defoe's books? Where does Defoe say, "Thirteen times I have been rich and poor," which is credited to him?
g. What is the correct spelling of that character in *Faust* classically given as *Mephistophilus?* I have seen it Mephistopheles, Mephistophiles, Mephistocles, and Mefistofeles. ALONZO.

2. Can some reader inform me about the originality and meaning of the superstition about the "Irish bone"? H. R.

3. Which reading is adopted by Christian denominations, of Psalm II, 8, King James version? It reads as follows:

"Ask of me, and I shall give *thee* the heathen *for* thine inheritance, and the uttermost parts of the earth *for* thy possession."

Without the italicized supplied words, which I have been informed can be omitted in this version, it reads:

"Ask of me, and I shall give the heathen thine inheritance, and the uttermost parts of the earth thy possession."

One will readily observe that the promise of the first is the reverse of the latter. ALLEN B. COOKE.

4. I have seen it stated that the Platonic philosopher, Thomas Taylor, wrote his own epitaph. Can some one give it? PRO BONO.

5. Has the introduction of the new language called *Visona*, made by Arthur Merton of Chicago, been taught or tried by any school or otherwise? In my judgment it is far more simple, comprehensive, and complete than Volapük. L. O. K.

6. Which letter of the alphabet is said to be the most mystical and why is one more mystical than another? READER.

7. Is the surface of a river convex when rising, and concave when falling? and if so why? J. G. GHOLSON.

8. Why does a cork, when put into a glass tumbler full of water, rise and remain in the center, which is the highest part of the water?
J. G. GHOLSON, Broughton, Ill.

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

"Heaven is one; how can there be more than one God there?"—LAO TSEU.

VOL. VI. SEPTEMBER, 1889. No. 9.

FATHER TIME WITH HIS SCYTHE. (Vol. VI, p. 348.) Saturnus of Saturn (in Greek *Chronus*) is Time. He was the son of Cœlus or Uranus (heaven) and Terra (earth). He was naturally artful and by means of his mother Terra revenged himself on his father Cœlus whose cruelty to his children had provoked the anger of Terra. She armed her son Saturn with a scythe fabricated from metals, and with it mutilated his father. Therefore Saturn obtained his father's kingdom by consent of his brothers whom he had liberated from the infernal regions where Cœlus had confined them. In process of time Saturn ill-treated his male offsprings as his own father did, for he feared retaliation by his sons, hence his sister-wife Rhea concealed the three male children Jupiter, Neptune, and Pluto from him by deceiving him. When manhood arrived Jupiter usurped his father's (Saturn) throne and divided the kingdom among the three brothers—Jupiter reigning over heaven and earth, Neptune over the sea, and Pluto over the under world or infernal regions. Saturn was banished into Italy where the country took the name Latium, from *lateo*, as being the place of his *concealment*. Hence Saturn is represented as an old man bent through age and infirmity, holding a *scythe* in his right hand, with a serpent biting its own tail, which are symbols of Time and the revolution of the year. "Time cuts down all both great and small." Hence the symbol ♄ for Saturn or Time.

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On Magic Squares.

(By T. S. Barrett, London, Eng.)

1000	804	81	4
2	83	800	1004
803	1001	5	80
84	1	1003	801

1889.

As many readers of NOTES AND QUERIES are interested in what relates to the properties of numbers, perhaps they may welcome a few more words on magic squares. The Egyptians and Pythagoreans attached a superstitious veneration to these combinations of numbers, and even carried them about as talismans. Mathematics, however, shows that the wrong thing was wondered at. It would be much more wonderful if numbers could *not* be arranged as in magic squares.

Look at the diagram at the head of this article. How many other "four-root" squares could be made for 1889? To some it may be a surprise that even one could be made; for it is often said that a four-root square (so called, as 4 is the square root of the total number of cells in it) cannot be made for an odd number — still less for a prime number. 1889 is both. Nevertheless, there are *thirteen billions* of others possible—very likely more. Not counting their various different arrangements among themselves, the different sets of numbers alone that are available for forming such a square, amount to, at least, 67,695,000,000. This at first seems very remarkable, considering that a person, new to the subject, might be many weeks before hitting upon right numbers and their proper arrangement when found. Here mathematics again removes our wonder by bidding us think of the enormous number of possible squares that are *not* magic—a number so vast that billions are infinitesimal in comparison. As a fact, the permutations of 1889 things, taken 16 at a time, may be counted by a number 53 figures long; in words, it is twenty-five thousand octillions.

Of course, any wonderful square might, in one sense, be called magical; but here I restrict the term to the usual technical meaniug. A "magic square," then, must have these three properties; it may have others in addition; but these are essential:

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1. It must consist entirely of *integers*.
2. Each cell must be occupied by a different number.
3. All the rows and columns, also the two diagonals, must sum alike.

The principle underlying the formation of magic squares is that of superposition (used by M. de La Hire, to a limited extent). If we have two or more squares, not magic, provided their rows, columns, and diagonals add alike, — a new square formed by adding together the numbers in the corresponding cells of the others, will *sum* magically, and *may*, under certain circumstances be a proper magic square.

A.

7	1	4
1	4	7
4	7	1

B

1	2	–
–	1	2
2	–	1

C.

8	3	4
1	5	9
6	7	2

Thus, the squares A and B are not magic, as they have duplicate numbers ; but they *add* magically ; the summation of A is 12 in all ways, that of B is 3. The square C formed by adding the respective numbers in the two others, likewise adds magically ; the summation being 15, the sum of 3 and 12. It is also a proper magic square, there being no duplicates. The three-root square however is the least interesting of magic squares ; for it admits of no variation of arrangement, and can only give summations that are multiples of 3.

All 3-squares are of this form—

a+b	a+2c	a+2b+c
a+2b+2c	a+b+c	a
a+c	a+2b	a+b+2c

where a, b, and c are any numbers. The summation is 3(a+b+c) ; and therefore it must be a multiple of 3.

We pass on to the four-root square.

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A	B	C	D
D	C	B	A
B	A	D	C
C	D	A	B

—	g	e	f
e	f	—	g
f	e	g	—
g	—	f	e

Let the letters in the squares above, as in algebra, stand for any number we please. It will be observed that both squares sum magically; the summation being A+B+C+D in the one, and e+f+g in the other. But neither is a magic square, as each letter is repeated four times. However if we combine the two by superposition, the resulting square is properly magic; the summation being A+B+C+D+e+f+g. Thus:

A	B+g	C+e	D+f
D+e	C+f	B	A+g
B+f	A+e	D+g	C
C+g	D	A+f	B+e

If, then, we substitute for letters such numbers that no duplicates occur, we shall obtain the magic square required. One certain way to avoid duplicates is to let the *greatest* of the three numbers e, f, g, be *less* than any difference between A, B, C, and D, when the latter are arranged in order of magnitude. This is how I made the square 1889. Put A = 1000; B = 800; C = 80; D = 1; e = 1; f = 3; g = 4. These values sum 1889. The greatest of e, f, g, viz. 4, is considerably less than any of the differences between A, B, C, D; so there is no

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possibility of duplicates. On substituting for the letters as above (A ; B+g ; C+e ; etc.,) in the last square, their numerical values, the magic square will be formed.

Considering the immense variety of seven numbers that make the total 1889, the estimate of the number of squares previously given can be easily credited.

Magic squares whose roots are multiples of 4 may be made in a similar manner; but an easier method for such "evenly-even" squares (as they are called),—when the summation required is a multiple of *half the root*,— is that of making them in "compartments" (to be described presently).

"Oddly-even" squares (*i. e.* those whose roots are 6, 10, 14, etc.), are made with difficulty. The methods to be employed in their case would, however, take up too much space to describe now.

Squares whose roots are odd numbers, are easier than any others to make. The following is the method when the root is not a multi- of 3. Let the root be 5, for example:

No. 1.

A	B	C	D	E
C	D	E	A	B
E	A	B	C	D
B	C	D	E	A
D	E	A	B	C

No. 2.

–	f	g	h	i
h	i	–	f	g
f	g	h	i	–
i	–	f	g	h
g	h	i	–	f

The letters, as before, stand for any number at pleasure. On combining the two squares, by adding together the corresponding cells, the resulting square will have, in all directions, the summation of A+B+C+D+E+e+f+g+h+i,—and will be magic, if we choose such numbers that will not form duplicate combinations.

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It will be observed that each row has the letters in the same order, but beginning at a different point. In No. 1, each row, after the first, begins with the *third* letter of the row above, whereas in No. 2, each begins with the *fourth*. It is necessary to make this difference, or the combinations of letters in the resulting square would be repeated.

These methods of making magic squares give all summations. By "all summations" is meant all above the lowest possible for any root. The lowest possible in a three-square is 15; in a four-square, 34; in a five-square, 65; and so on. If r signify the root, than the lowest possible is always $\frac{r^3+r}{2}$ and occurs of course, when the square is filled with consecutive numbers commencing with 1.

It is not essential that A, B, C, and the other capital letters should always be the greatest numbers. For example, the values of 1, 2, 3, 4, to the capital letters, and 4, 8, 12, to e, f, and g, will make a four-square summing 34. Thus,

1	14	7	12
8	11	2	13
10	5	16	3
15	4	9	6

Similarly a five-square, summing 65, will arise from the numbers 1, 2, 3, 4, 5; and 5, 10, 15, 20.

A square capable of all summations may immediately be changed into another simply by altering the highest nnmbers in it. Thus, the square above will be turned into one summing 35, by adding 1 to the four highest numbers in it (13, 14, 15, 16). If 2 be added, it is changed into a square for 36; and so on. Similarly a five-square capable of all summations can be altered by increasing its five highest numbers. But any attempt to alter squares *not* capable of all summations will simply result in the destruction of their magic properties.

All magic squares excepting those whose roots are 4, 6, and prime numbers, may be made in what Montucla calls "compartments." That is, the square may be made to consist of a group of smaller magic sqnares. Thus,

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An 8-square	may	contain	4	squares	with	root 4.
A 9-square	"	"	9	"	"	" 3.
A 10-square	"	"	4	"	"	" 5.
A 12-square	"	"	9	"	"	" 4.
		or	16	"	"	" 3.
A 14-square	"	"	4	"	"	" 7.

And so on.

There are two ways of achieving this. One, applicable to all cases where the small squares are not three-squares, is to make these subsidiary inner squares all sum alike, though consisting of different numbers. Thus a group of four different squares, each summing 130, will be a root-eight square, summing 260. When the roots of the small squares are odd numbers, it is rather troublesome (though not impossible, excepting in the case of a three-square) to make them sum alike ; and in such cases it is easier to adopt a method that is applicable to all compound roots, except 8 and oddly-even. The way is, to give *different* summations to the inner squares, and then to arrange them in accordance therewith, as if each were merely the number in a cell of a magic square. Thus, suppose we have 9 root-three squares, summing respectively 15, 42, 69, and so on in arithmetical progression ; then, if we arrange them according to their summations, the whole becomes a root-nine square, summing 369. Thus,

42	177	150
231	123	15
96	69	204

If the great 20-root magic square with 400 cells (published in NOTES AND QUERIES, Vol. VI, p. 313) be examined, it will be seen it is made in " compartments " in the above manner. It consists of 16 squares of root 5, the summations of which form the arithmetical progressions 65, 190 315, &c., increasing by the common difference of 125. If the 16 cells of a four-square be filled with these numbers, in a similar or any other magic order, the summation will be identical, namely, 4,010.

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To return for a moment to the subject of "all summations." It may be useful to know that there is a way applicable to all magic squares (excepting the three-square) of altering the summation, when it is required equal to, *or greater than*, $\frac{r^3+r}{2} + r^2$.

The plan is, to increase (not the greatest numbers, but) any numbers that may happen to be in cells, so selected that one and only one shall be in each row, one and only one in each column, and one and only one in each diagonal. Let us take as an illustration a four square formed according to Montucla's method, and which is *not* capable of all summations.

9	6	7	12
4	15	14	1
16	3	2	13
5	10	11	8

Suppose we desire to raise the summations from 34 to 51. We must add 17 to four of the numbers. Let us select 6, 1, 2, and 5 for this purpose, as one of them (and only one) is in each row, column, and diagonal. On the alterations being made, the new square will be found to sum 51 as required. But if instead of choosing 51, we should try to get a summation that requires the addition of a number less than r^2 (in this case 16), we may get duplicate numbers. Thus, on adding 15, we get another 16; on adding 10, all four become duplicates; and if we add only 1 or 2, duplicates will arise whatever cells we choose for alteration.

SURNAMES BEGINNING WITH I. (Vol. VI, p. 252.) I have counted the names in the index of Lower's "Essays on English Surnames," which amount to 5390. A 262, B 550, C 446, D 279, E 117, F 260, G 312, H 376, I 48. J 76, K 81, L 249, M 359, N 91, O 77, P 375, Q 16, R 193, S 578, T 288, U 15, V 55, W 262, X 1, Y 22, Z 2.

Lloyd, although a British surname, is not to be found in the index.

MRS. L. T. GEORGE.

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Questions and Answers.

THE WANDERING JEW. (Vol. V. p. 69.) The Wandering Jew of Greek tradition is Aristeas, a poet, who continued to appear and disappear alternately for above 400 years, and who visited all the mythical nations of the earth.

Of Jewish story, tradition says that Cartaphilos, the door-keeper of the judgment hall in the service of Pontius Pilate, struck our Lord as he led him forth, saying, "Get on! faster, Jesus!" Whereupon the man of sorrows replied, "I am going, but tarry thou till I come [again]." This man afterwards became a Christian, and was baptized by Ananias under the name of Joseph. Every hundred years he falls into a trance, out of which he rises again at the age of 30.

The earliest account of the Wandering Jew is in the Chronicles of the Abbey of St. Alban's, copied and continued by Matthew Paris (1228). In 1242 Philip Mouskes, afterwards bishop of Tournay, wrote the "rhymed chronicle."

Another legend is that Jesus, pressed down by the weight of the cross, stopped to rest at the door of a cobbler named Ahasuerus, who pushed him away, saying, "Get off! away with you, away!" Our Lord replied, "Truly, I go away, and that quickly, but tarry thou till I come." This is the legend given by Paul Von Eitzen, bishop of Schleswig, in 1547.—*Greve*, "Memoirs of Paul Von Eitzen," 1547.

A third legend says it was the cobbler Ahasuerus who haled Jesus to the judgment seat; and that as the man of sorrows stayed to rest awhile on a stone, he pushed him, saying, "Get on, Jesus, you shall not stay!" Jesus replied, "I truly go away, and go to rest; but thou shalt go away and never rest till I come."

In German legend, the Wandering Jew is associated with John Buttadæus, seen at Antwerp in the 13th century, again in the 15th, and again in the 17th centuries. His last appearance was in 1773, at Brussels. Leonard Doldius, of Nüruburg, in his "Praxis Alchymiæ" (1604), says that the Jew Ahasuerus is sometimes called "Buttadæus." Signor Gualdi, who had been dead 130 years, appeared in the latter half of the 18th century, and had his likeness taken by Titian. One day he disappeared as mysteriously as he had come. — "Turkish Spy," ii (1682).

In the French legend the French call the Wandering Jew Isaac

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Lakedion or Laquedem.—Mitternacht, "Dissertatio in Johan," xxi, 21.

In Dr. Croly's novel, the name given to the Wandering Jew is Salathiel Ben Sadi, who appeared and disappeared toward the close of the 16th century at Venice, in so sudden a manner as to attract the attention of all Europe. Dr. Croly in his novel called "Salathiel" (1827), traces the course of the Wandering Jew; so does Eugene Sue, in "Juif Errant" (1845); but in these novels the Jew makes no figure of importance.

G. Doré, in 1861, illustrated the legend of the Wandering Jew in folio wood engravings.

It is said in legend that gipsies are doomed to be eternal wanderers because they refused the Virgin and Child hospitality in their flight into Egypt.—Aventinus, "Annalium Boiorum," liber septem, vii. (1554).

The legend of the Wild Huntsman, called by Shakespeare "Herne the Hunter," and by Father Matthew "St. Hubert," is said to be a Jew who would not suffer Jesus to drink from a horse-trough, but pointed out to him some water in a hoof-print, and bade him go there and drink.—Kuhn von Schwaznordd, Sagen, 499.

MRS. L. T. GEORGE, Chicago, Ill.

CAPPADOCIA, CILICIA, AND CRETE. (Vol. VI, p. 300.) *Kilikía* is the Greek form of the word. (See Greek New Testament Acts VI, 9, and elsewhere.) In Roman characters this is CILICIA, or (after 12th century when doted i came into use) Cilicia. Roman c = Greek k, and Roman I or i = Greek I. In English, the rule, with many exceptions of course, is "c and g ar soft before e, i, y." Analogy with other words in our tung has caused Cilicia to be pronounced with c = s. To-day there is a tendency among scholars to spel words with k insted of c, so as not to mislead, as kelt, skeptic, Thukydides; and even where there is no danger of misleading, as Sanskrit, Sokrates, Kappadokia, etc.

[*Revised Speling*;—OMIT useles leters. CHANGE d to t, ph to f, gh to f, tch to tsh, if sounded so]. A. HAMILTON, Toronto, Ont.

RUSSIA LEATHER. (Vol. V, p. 56.) Russia leather is a soft kind of leather made in Russia, and having a peculiar odor from being impregnated with an oil obtained from birch bark. It is much used in book-binding, on account of its not being subject to mold, and being proof against insects, this quality being due to the effect of the empyreumatic oil used in dressing it. MRS. L. T. GEORGE.

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MUGWUMP. (Vol. II, pp. 455, 547, 560; IV, 232.) The word "mugwump" is not in the Encyclopædia Britannica, but is in the American Supplement, Vol. III, p. 783.

"The word belongs to the Algonquin dialect of the Indian language of North America, and is used by John Elliot in his translation of the bible (Cambridge, Mass., 1661) to translate the Hebrew word 'alluph,' a leader. Elliot used it in a sense of 'big chief' a term more comprehensive to the Indian mind than that which appears in the King James version 'duke.' The word was spelled 'mugquomp' in the singular, and 'mugquampoag' in the plural. It appears in many places throughout the Algonquin translation of the Old Testament, a notable place being in I Chronicles 1, 51-53; also, Genesis XXXVI, 15, given herewith :

'Young mugquampoag wunnaumonuh Esau ; wunnaumonuh Eliphaz ; montomegheunche Esau ; mugquomp Teman ; mugquomp Omar ; mugquomp Zepho ; mugquomp Kenaz.'

'These were dukes of the sons of Esau ; the sons of Eliphaz ; the first-born son of Esau ; duke Teman, duke Omar, duke Zepho, duke Kenaz.'

MRS. L. T. GEORGE.

OLDEST BOOK EXTANT. (Vol. VI, p. 316.) The oldest book extant is believed to be the "Book of the Precepts of Prince Ptabhotep," the oldest composition in existence. It is better known as the "Prisse Papyrus," and is preserved in the National Library of France at Paris. This book is of the age of Hssa Tatkera, the last king but one of the fifth dynasty (Memphis) who flourished abont 3750 B. C. The author Ptakr-hotep, was a member of the royal family. It is a sort of handbook for young people, a treatise on practical morality, somewhat in the style and tone of the writings of Confucius. In some places the writings call to mind the wisdom of Solomon. Filial obedience is inculcated as the basis of all good order. There were probably other documents written in the hieratic characters of greater antiquity than the Prisse Papyrus, but this alone remains as the most important monument of that distant epoch.

F. M. C., Warner, N. H.

TURNING TO THE RIGHT. (Vol. V, p. 56.) It is stated that the Puritans in a spirit of defiance of English customs and manners, and for the purposes of alienating themselves from such home influences, introduced turning to the right, but retained the custom of sitting on the right.

MRS. L. T. GEORGE.

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THE MOST MYSTICAL LETTER IN THE ALPHABET. (Vol. VI, p. 348.) F. V. Kenealy, in his "Book of God," p. 12, says that the letter M is a letter peculiarly sacred in all languages and all religions; that it is a symbol of waves of water (ᴍᴍᴍ). M final, in the Eastern languages, means 600. It is the monogram of Maya, Mary, Minerva, Mercury, Manu, Messias (divine wisdom), Metis (the word), Matrix, Mas (the male), Mater, Mamma, Mihr (commonly called Mithras), the Monad, Mystery, and an immense variety of words which bear those refined and subtle meanings familiar to every student in theology. All letters are mystic, says Kenealy, but M is preëminently so.

M final meaning 600, Dr Kenealy takes 600 years as the measure of the messianic appearings of his twelve messiahs. He gives four such periods (600 being called a Naros), equal to 2400 years, to the 24 ancients ("elders" in Rev. IV, 4, 10) who, he claims appeared prior to Adam. Then appeared 24 messiahs at intervals of 600 years as follows, making the present time about A. M. 9600:

1 Adam-Oannes,	3000	7 Amosis, Moses,	6600
2 Enoch-Edris,	3600	8 Lao-Tseu, Elijah,	7200
3 Fo, Buddha,	4200	8 Jesous-Christos,	7800
4 Brigoo,	4800	10 Mo'Armed,	8400
5 Zaratusht,	5400	11 Chenzig-Khan,	9000
6 Thoth-Hermes,	6000	12 Parasu-Rama,	9600

The last named is now supposed to be born in the flesh and in due time will in the order of things be made known to inhabitants of the earth, and a new order of things will then begin. The M final = 600 is only once used in the Hebrew Bible other than a final M, this single instance is in the word *Imrbe* found in those remarkable words of Isaiah (IX, 6 7). Cassini, Picus, Higgins, and others have examined these verses critically and believed a secret of the Naros was designed to be concealed in the word by the prophet. The question might well be asked, "Why have these twelve shining lights of new awakenings appeared at such regular intevals of 600 years=a Naros?

Some student in nomenclature not long since announced a lecture on the "The Initial M in the Scriptures," proposing to develope its mysteries in such words as Melchizedek, Machpelah, Maccabees, Maher-shalal-hash-baz, Mazzaroth, Magog, Metatron, Michael, and many such like, over which there has been much discussion as to their true

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meaning. Masonry also furnishes a field of re-*search* for the mystical. A lecture by Mrs. Cora L. V. Tappan, entitled "The Symbol of the Letter M," delivered in Chicago, in 1877, gives some singular information on this letter.

THE DIMENSIONS OF HEAVEN. (Vol II, p. 609.) After re-reading the article, "The reason why Father Adam ate the Apple," I am led to ask has any estimate been made of the dimensions of heaven?

CONSTANT.

We reply that there have been several estimates as to the size of the "many mansions." We take the following from Bombaugh's "Gleanings from the Harvest Fields of Literature," p. 291:

"And he measured the city with the reed, twelve thousand furlongs. The length, and the breadth, and the height of it are equal." — Revelation XXI, 16.

"Twelve thousand furlongs, 7,920,000 feet, which being cubed is 496,793,088,000,000,000,000. Half of this we will reserve for the Throne of God and the Court of Heaven, and half the balance for streets, leaving a remainder of 124,198,272,000,000,000,000 cubic feet. Divide this by 4,096, the cubic feet in a room 16 feet square, and there will be 30,321,843,750,000,000 rooms.

We will now suppose the world always did and always will contain 990,000,000 inhabitants, and that a generation lasts for $33\frac{1}{3}$ years, making in all 2,970,000,000 every century, and the world will stand 100,000 years, or 1,000 centuries, making in all 297,000,000,000 inhabitants. Then suppose there were worlds equal to this in number of inhabitants and duration of 100 years, making a grand total of 297,000,000,000,000 persons, and there then would be more than 100 rooms sixteen feet square for each person."

THE NAME PYRAMID. (Vol. VI, p. 300.) The etymology of the term *pyramid* is conjectural. Though supposed to be Egyptian, the Egyptian designation of these structures was *b'r-b'r*. But in the Coptic, PI-RA-ME signifies the high place of the sun, or Ra. The term *puramis* came into use in the Greek language as a designation of the Grecian structures, and also of geometric figures. The pointed cakes which were employed in the Bacchic worship were so named. It may have been from *pur*, pie; the structure denoting a flame, as the form is meant to express. The triangle standing on its base has that symbolic meaning, as denoting the occult fire which denotes life itself.

A. WILDER.

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THE FOURTH DIMENSION. (Vol. IV, p. 327.) Why not carry out the series thus ?

	Point.	Line.	Square	Cube.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	Nth.
Point,	1	2	4	8	16	32	64	128	256	512	1024	*2nth*
Line	0	1	4	12	32	80	192	448	1024	2304	5120	*x*
Square,	0	0	1	6	24	60	200	592	1632	4288	10880	*y*
Cube,	0	0	0	1	8	40	140	480	1552	4736	13760	*z*
4th,	0	0	0	0	1	10	60	260	1000	3552	11840	*m*
5th,	0	0	0	0	0	1	12	84	428	1958	7464	*p*
6th,	0	0	0	0	0	0	1	14	112	652	3260	*q*
7th.	0	0	0	0	0	0	0	1	16	144	940	*r*
8th,	0	0	0	0	0	0	0	0	1	18	180	*s*
9th,	0	0	0	0	0	0	0	0	0	1	20	*t*
10th,	0	0	0	0	0	0	0	0	0	0	1	*v*
Nth,	0	0	0	0	0	0	0	0	0	0	0	*w*

L. H. AYMÉ, Chicago, Ill.

THE WOODEN HORSE OF VIRGIL'S ÆNEID. (Vol. VI, p. 348.) An allusion to the wooden horse occurs in book IV, of the Odyssey (373-394). Prince Telemachus is at Sparta seeking tidings of his father Odyssus, and is entertained by kind Menelaus with personal reminiscences of the siege of Troy. The beautiful Helen is also a listener while her husband relates the following episode :

"What wondrous conduct in the chief appeared,
When the vast fabric of the steed we reared !
Some demon, anxious for the Trojan doom,
Urged you with great Deiophobus to come,
To explore the fraud; with guile opposed to guile.
Slow pacing thrice around the insidious pile,
Each noted leader's name you thrice invoke,
Your accents varying as their spouses spoke !
The pleasing sound each latent warrior warmed,
But most Tydides' and my heart alarmed:
To quit the steed we both impatient press,
Threatening to answer from the dark recess.
Unmoved the mind of Ithacus remained;
And the vain ardours of our love restrained:
But Anticlus, unable to control,
Spoke loud the language of his yearning soul;
Ulysses straight, with indignation fired,
(For so the common care of Greece required),
Firm to his lips the forceful hand applied,
Till on his tongue the fluttering murmurs died.
Meantime, Minerva, from the fraudful horse,
Back to the court of Priam bent her course."—*Odyssey*, IV, 373-394.

NASIK MAGIC SQUARES. (Vol. VI, pp. 312, 348.) We suppose that the inquirer refers to the work "nasik" in his question. This word was first applied to a certain property of magic squares by Rev. A. H. Frost, who resided at *Nasik*, India.

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THOMAS TAYLOR'S EPITAPH. (Vol. VI, p. 348.) The epitaph of Thomas Taylor was written by himself, and is as follows :

Health, strength, and ease, and manhood's active age,
Freely I gave to Plato's sacred page,
With Truth's pure joy, with Fame my days were crown'd,
Tho' Fortune adverse on my labours frowned.

POEM ENTITLED "SOMETIME." (Vol. VI, p. 268.) The poem entitled "Sometime" may be found complete in the New Hampshire *Journal*, Vol. VI, No. 22, 1886, and is as follows :

H. W. HERRICK.

Sometime.

BY MARY RILEY SMITH.

"What I do thou knowest not now, but thou shalt know hereafter."

Sometime, when all life's lessons have been learned,
And sun and stars forevermore have set,
The things which our weak judgment here have spurned,
The things o'er which we grieved with lashes wet,
Will flash before us, out of life's dark night,
As stars shine more in deeper tints of blue,
And we shall see how all God's plans were right,
And how what seemed reproof was love most true.

And we shall see how, while we frown and sigh,
God's plans go on as best for you and me;
How, when we called, he heeded not our cry,
Because his wisdom to the end could see;
And even as prudent parents disallow
Too much of sweet to craving babyhood,
So God, perhaps, is keeping from us now,
Life's sweetest things, because it seemeth good.

And if sometime, commingled with life's wine,
We find the wormwood, and rebel and shrink,
Be sure a wiser hand than yours or mine
Pours out this portion for our lips to drink.
And if some friend we love is lying low,
When human kisses cannot reach his face,
Oh, do not blame the loving Father so!
But wear your sorrow with obedient grace.

And you shall shortly know that lengthened breath
Is not the sweetest gift God sends his friend,
And that sometime the sable pall of death
Conceals the fairest bloom his love can send.
If we could push aside the gates of life,
And stand within and all God's workings see,
We could interpret all this doubt and strife,
And for each mystery would find a key.

But not to-day. Then be content poor heart!
God's plans, like lilies, pure and white unfold.
We must not tear the close-shut leaves apart;
Time will reveal the hidden cups of gold.
And if through patient toil we reach the land,
Then many feet, with sandals loose, may rest,
Then shall we know and clearly understand—
I think that we shall say, "God knows the best."

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QUESTIONS.

—o—o—o—

1. Are there any well authenticated cases of hair having turned white in the space of a few hours, whether by terror or other emotion? AYMÉ.

2. Who was the author of the following quotation, and where can it be found: "I, too, am of Arcadia." AYMÉ.

[See a similar quotation in N. & Q., Vol. II, p. 496, (*g*, 1,)]

3. Where do we first find the following expression used: "Nothing endures save Art." AYMÉ.

4. How did the saying originate, "He has gotten the mitten"? F. J. P., Concord, N. H.

5. Where and by whom was this phrase first used: "The eternal fitness of things." JOHN G. T. CRUSE.

6. What is the origin of the expression, "Keeping bachelor's hall"? L. M. O.

7. Is there a beardless race of people? L. M. O.

8. What is the origin of "three cheers and a tiger"? L. M. O.

9. Why is a person named John nicknamed *Jack?* JOHN.

10. Why is *Jacobus* anglicized by James? O. O.

11. In some of our former arithmetics, after illustrating the method of proofs by "casting out the nines," it says "the work is supposed to be right." Has the proof by the excess of nines ever failed to prove any example correct? F. K. GOLDSMITH.

12. Joseph Justus Scaliger is reported to have said that he would rather have been the author of the Ode of Horace, addressed to Melpomene, than to be the king of Arragon. Gen. James Wolfe is reported to have said he would rather have been the author of Gray's "Elegy" than to have the honor of taking Quebec. Who is said to made a similar remark in reference to Bryant's "Thanatopsis"? SEARCHER.

13. What martyr replied to all the question asked him while at the stake, by saying, "I am a Christian?" SEARCHER.

14. What rule are we to follow in anglicizing and pronouncing such Greek names as Xenophon (Zenophon), Zoroaster (Xoroaster), Zeno (Xeno), Xerxes (Zerxes or Xerzes), &c.? XENOS.

15. Can you place these quotations for me? M. N. R.

"World-losers and world-forsakers,
On whom the pale moon gleams;
Yet we are the movers and shakers
Of the world forever it seems."

"A Christian is of brightness, not of night,
A smiling Abel, not a frowning Cain."

"Live to thy neighbor, live unto thy God,
Not to thyself alone."

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

" *God hath spoken once ; two fold is what I heard.*" — THE QABBALAH.

VOL. VI. OCTOBER, 1889. No. 10.

QUOTATION FROM COWPER AND HABAKKUK. " He that runs may read " is a quotation from the lines in William Cowper's *Triocinium, or a Review of Schools*, lines 79-82 :

> " But truths on which depend our main concern,
> That 'tis our shame and misery to learn,
> Shine by the side of every path we tread,
> With such a luster, he that runs may read."

" He may run that reads " is a quotation from Habakkuk II, 2 : " Write the vision, and make *it* plain upon tables, that he may run that readeth it."

WORDS ENDING IN " DOUS." There has been found nine words ending in " dous " : Amphibodous, apodous, cephalodous, gasteropodous, gastropodous, hazardous, pteropodous, stupendous, and tremendous.

WORDS ENDING IN " CION." There has been found eight words ending in " cion " : Cesteacion, coercion, epenicion, internecion, ostracion, pernicion, scion, and suspicion. All are said to be found in Webster, with the exception of the first, which is in Worcester.

A CURIOUS THEORY. A correspondent of the *Northwestern Railroader*, says the *Age of Steel*, advances a curious theory for the increasing prevalence of floods and rain-storms. He says :

" There are over 30,000 locomotives in use in North America, and from estimates, from them alone over 55,000,000,000 cubic yards of vabor are sent into the atmosphere every week, to be returned in the form of rain, or over 7,000,000,000 cubic yards a day — quite enough to produce a good rain-fall every 24 hours. Estimating the number of other non-condensing engines in use as eight times the number of locomotives, the total vapor thus projected into the air every week in this country, amounts to more than 470,000,000,000 cubic yards."

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QUESTIONS and ANSWERS.

LOUD - VOICED PERSONS. (Vol. VI, pp. 284, 298, 347.) I have obosrved two answers thus far as to loud-voiced persons. I question whether the loudest-voiced man of whom we have a record was Stentor as sung by Homer (*Iliad* Bk v, 786-789). We have a record of two person anterior to Homer. We read in the Book of Jasher XXXVIII, where Simeon and Levi fought against the twelve men of the city of Sarton, and that Levi beheaded one man with his own sword; and verse 41 of this chapter shows the sonorous strength of Simeon's voice :

"And the sons of Jacob seeing that they could not prevail over them, Simeon gave a loud and tremendous shriek, and the eleven powerful men were stunned at the voice of Simeon's shrieking."

In chapter XXXIX, we have an account of the battle of the sons of Jacob with the inhabitants of the city of Gaash, the battle was both in the front and rear, and the men upon the wall were casting arrows and stones upon the sons of Jacob. Verse 19 says :

"And Judah, seeing that the men of Gaash were getting too heavy for them, gave a most piercing and tremendous shriek and all the mem of Gaash were terrified at the voice of Judah's cry, and men fell from the wall at *his* powerful shriek; and all those that were without and within the city were greatly afraid of their lives."

HUGONOTORUM STRAGES. (Vol. VI, p. 332.) *Strages* signifies overthrow, destruction, and was a fitting term for the damnable massacre of St. Bartholomew, which made its perpetrators, participators and sympathizers perpetually infamous. A. WILDER.

GREEK FIRE. (Vol. V, p. 56.) Greek fire is a combustible composition which burns under water, the constituents of which are supposed to be asphalt, with nitre and sulphur. It was thrown from engines, and is said to have been invented by Callinicus, an engineer of Heliopolis, in Syria, in the 7th century, to destroy the Saracens' ships, which was effected by the general of the fleet of Constantine Pogonatus, and 30,000 men were killed. A so-called "Greek fire," probably a solution of phosphorus in bi-sulphide of carbon, was employed at the seige of Charleston, S. C., in September, 1863.

MRS. L. T. GEORGE.

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HYPONOIA AND PAROUSIA. (Vol. VI, p. 332.) One needs to see the book published anonymously in New York, to determine what the author meant by *hyponoia* and *parousia*. The two words are Greek and were used in the Mysteries. *Parousia*, or being present, was applied to denote the epiphany, or appearing of the forms of the gods in the initiatory rites ; and *hyponoia* denoted the under meaning, or interior sense of the second dramas, which were acted on these occasions. Both terms appear in the epistles ascribed to Paul. First Corinthians xv, 23, reads : "Christ the first-fruits, then they of Christ in his *parousia*." First Timothy vi, 4, should read : " He is inflated with arrogance, comprehending nothing, but having a morbid craving in regard to controversies, and wars of words, out of which come malignity, contention, calumnies, and *hyponoias*. A. WILDER.

Problem.

How many times can fifteen girls take a walk, in triple groups, no two walking together the second time ?

SOLUTION.

The following columns give every possible combination, answering the conditions, the girls being represented by the digits in their order.

1	4	5	9	12	13	1	7	9	9	15	2
2	5	6	10	13	14	2	8	10	10	1	3
3	6	7	11	14	15	3	9	11	11	2	4
4	7	8	12	15	1	4	10	12	12	3	5
5	8	9	13	1	2	5	11	13	13	4	6
6	9	10	14	2	3	6	12	14	14	5	7
7	10	11	15	3	4	7	13	15	15	6	8
8	11	12				8	14	1			

I

1	6	11
2	7	12
3	8	13
4	9	14
5	10	15

Since there are 35 groups, and 5 of them embrace the whole number of girls. they can walk together according to the conditions, seven times. For convenience of arranging the fifteen girls, observe the following collection of groups. From the above combinations, first write those containing 1, then those containing 2, etc., omitting those

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containing a number with it already written. Thus we may write:

1	4	5	5	8	9
1	12	15	5	11	13
1	2	13	5	7	14
1	7	9			
1	8	14	6	9	10
1	3	10	6	12	14
			6	8	15
2	5	6			
2	3	14	7	10	11
2	8	10	7	13	15
2	9	15			
2	4	11	8	11	12
3	6	7	9	12	13
3	4	15			
3	5	12	10	13	14
3	9	11			
			11	14	15

The first arrangement of the fifteen girls was formed above in the arrangement of the columns.

The following six arrangements of the groups are easily made from the last combinations. First head the six columns with the groups beginning with 1, then write beneath those beginning with 2, and so on, observing to have the same number but once in an arrangement.

II			III			IV		
1	4	5	1	12	15	1	2	13
2	3	14	2	5	6	3	6	7
7	13	15	3	9	11	4	10	12
6	9	10	4	7	8	5	8	9
8	11	12	10	13	14	11	14	15

V			VI			VII		
1	7	9	1	8	14	1	3	10
2	8	10	2	9	15	2	4	11
3	4	15	3	5	12	5	7	14
5	11	13	4	6	13	6	8	15
6	12	14	7	10	11	9	12	13

This is an old and interesting problem, and has appeared in several periodicals. We do not remember to have seen any simple solution; only the result has usually been given. The above will enable any one to make the combinations with ease.

H. A. Wood, A. M., Hokoken, N. J.

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THE ALPHABET IN EZRA XXI, 7. (Vol. I, p. 293.) It is stated on the page indicated that all the letters of the alphabet except J. are found in Ezra XXI, 7. This is true; and I am led to ask was this a design by the translators, or a mere happening? Are there other similar peculiar verses? HYSON.

We leave the first question for our correspondents to express themselves upon.

As to the second, we answer that there are others in the original Hebrew, that are peculiar in various ways, many of which have been noted in the volumes of NOTES AND QUERIES. Yet there are many yet to mention. In Genesis XLIX, 8-12 inclusive are the last words of Jacob to his fourth son Judah. The B'chai observes:

"In this section relating to Judah are to be found all the letters of the (Hebrew) alphabet except the letter *Zain* (and Zain means weapon), which shows all the battles which the kingdom of the House of David won, were not won by weapons, but in the name of God; and hence in the name of Judah are all the letters of Jehovah, besides the letter *Daleth* (Jod he vau daleth he = Jod he vau he + daleth). The *Daleth* being the *fourth* letter of the (Hebrew) alphabet, showeth that he was the *fourth* son of Jacob. Moreover, the kingdom of Judah is likened to the sun, as it is written: 'And his throne as the sun before me,' (Ps. LXXXIX, 36); for as the sun was created on the *fourth* day, so likewise was Judah the *fourth* son of Jacob; and as the sun when shining by day endeavors to shine more and more, so likewise will the kingdom of Judah endeavor to become ever greater." (See II Samuel III, 1.)

It is stated that in Genesis XVII, 5-6, and 15-16, that God inserted an *h* (he) in the name Abram and the same letter to the name Sarai; and the result was Isaac was soon after born. Both the Rashi and the B'chai relate the following in explanation to a like theory recorded in Genesis XXX, 1-13:

"Rachel said, 'There is the letter *He* in the name of Leah, but not in mine (the spelling of Rachel in Hebrew is without the letter *He*). This letter *He* occurs in the name Jehovah, and therefore Leah (having the same letter in her name) has children and I have none. I will give thee therefore my maid Bilhah, in whose name there are two *He's;* one *He* will have the effect of giving her children, and the other *He* will cause me to have children.'"

Kabbalists search for the occult meaning of the Hebrew alphabet and esoteric knowledge of the Scriptures. Some believe a very

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arcane interpretation is interwoven in names. One cannot but notice the orthography of many names of Hebrew wives. For instance :

Noa*h* and Noema*h*, and handmaid Sambe*th*e,
Abra*h*am and Sara*h*, and handmaid *H*agar,
Abra*h*am and Ketura*h*,
Isaac and Rebeka*h*, and handmaid Debora*h*,
Jacob and Rachel, and handmaid Bil*h*a*h*,
Jacob and Lea*h*, and handmaid Zilpa*h*.

Lame*ch* and { Ada*h*, Zilla*h*,
*Sh*em and Sali*th*,
*H*am and Na*h*la*th*,
Ja*ph*e*th* and Arisiva*h*,
Is*h*mael and Asia*h*,
Lot and Isca*h*,
Nahor and Milca*h*,
Esau and { Judi*th*, Ba*sh*mo*th*,
Judah and Alya*th*,
Simeon and { Dina*h*, Buna*h*,
Levi and Adina*h*,
Issachar and Arida*h*,
Dan and A*ph*lale*th*,
Naphtali and Merima*h*,
Gad and Uzi*th*,
Asher and { Ahona*h*, Hadura*h*,
Zebulon and Meru*sh*a*h*,

Benjamin and { Me*ch*alia, Ariba*th*,
(Reuben married Eliuram.)
Joseph and Asena*th*,
Poti-pherah and Dina*h*,
Potiphar and Zulica*h*,
Chenephras and Bi*th*ia,
Amram and Jo*ch*ebed,
Moses and Zippora*h*,
Aaron and Eli*sh*eba,
Joshua and Ra*h*ab,
Othniel and A*ch*sa*h*,
Elkanah and { *H*anna*h*, Peninna*h*,
Job and Ra*h*ma,
Jesse and Nitzene*th*
David and { Maaca*h*, Mi*ch*al, Bath-*Sh*eba,
Solomon and Naama*h*,
Zacharias and Elisabe*th*,

Noah's wife is known by many names She was called Bath-Enos, daughtar of Enos ; Rabbi Gedaliah says her name was Noemah ; Eutychius says she was called Haical, daughter of Namus son of Enoch ; the Gnostics call her Noria ; some writers call her Tithœa, the nurse of men, as Eve was the mother of men ; but the Rabbins say she was Naamah, the sister of Tubal-cain. (See Bereschith Rabba, f. 22, col. 4.)

Moses was known by many names. Bathia the daughter of Pharaoh called him Moses because she drew him out of the water ; Jochebed his mother called him Jekuthiel, saying "I had hoped for him" ; Miriam his sister called him Jared because she descended after him in the water to know what his end would be ; Aaron his brother said his name was Abi Zanuch because his father left his mother ; Amram his father called him Chabar because he himself was again reunited to

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Jochebed his wife; Kehath (Amram's father) called him Abigdor because God repaired the breach of the house of Jacob; Kehath's nurse called him Abi Socho because he was hidden three months in his tabernacle; but all Israel called his name Shemaiah, because "in his days God heard their cries and rescued them from their oppressors."

Moses-Jekuthiel-Jared-Zanuch-Chabar-Abigdor-Socho-Shemaiah.

Solomon's first wife's name was Djarada daughter of King Nubara, but his favorite was Naamah, No. 2, daughter of the king of the Ammonites; he also married Balkis queen of Sheba, and many others.

Many more names could be given, but these will suffice. While all these wives' name mentioned above are not found in the Bible, they are found in the Book of Jasher, the Talmud, and the Apocrypha.

DUODENAL ARITHMETIC. (Vol. VI, p. 263.) Duodenal arithmetic is probably the same as duodenary arithmetic, which is that system in which the local value of the figures increase in a twelve-fold proportion from right to left. MRS. L. T. GEORGE.

Duodenal arithmetic has twelve for its base. The names of the character-figures in this system are as follows:

0 zero, 1 an, 2 do, 3 tre, 4 tor, 5 pat, 6 sex, 7 ben, 8 ott, 9 nev, ϕ dis, ϑ elv, 10 ton. Then the system goes on by regular combinations, 11 tonan, 12 tondo, 20 doton, 30 treton, 100 san, 200 dosan, 358 tresan-fortonott, 1000 tos, 1600 tossexan, 10000 dill.

A good elementary treatise of this system is given in "Elements of Mechanics," pp. 313-330, by John W. Nystrom, Philadelphia, 1875.

NAME OF CALIFORNIA. (Vol. VI. p. 236.) California is a name given by Cortes, in the year 1535, to the peninsular now called Lower or Old California, of which he was the discoverer. He probably took it from the old Spanish romance of "Esplandian," by Garcia Ordonez de Montalvo, which was first published in 1510. In this work the name is given to an imaginary island, "on the right hand of the Indies, very near to the Territorial Paradise," abounding in treasures of gold. The root of the word is perhaps the Spanish "califa," caliph, from the Arabic "khalala," to succeed, the caliphs being the acknowledged successors of Mohammed. In some old geographies California is laid down as an island.

MRS. L. T. GEORGE.

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FIRST NAME OF AMERICA. (Vol. VI, p. 300.) Does your correspondent mean America after the last discovery? If not, we may give him such names as Atlantis, Fusang, and the like, to choose from. The name by which Columbus knew the region was *India*, and he was *pilato mayar de Indica*. Hence Peru and Mexico were long known as "the Indies." It may not be amiss, however, to add that the name *America* is itself American, and not a misnomer from the first name of Alberico Vespuzio. It belonged to a range of mountains in Central America rich in gold, and signifies the most elevated. Naturally *America* was the first name which a gold-hunter would learn, and would be common in Europe. It first appeared on a map published in 1507 by a bookseller at *St. Die* (Vages), named Waltzemüller, or by affectation of Hellenic fame, Hylacomglas. Probably he adopted it as a man's name. This could be of a person with "Rabb. Talmud" "Mochus," and a few other personifications. In fine, the Americ mountains gave the continent its name. A. WILDER.

ROBERT B. THOMAS. (Vol. VI, p. 268.) Robert B. Thomas, the almanac-maker, gave the following account of his enterprise. He desired to do business on his own account, and after several fruitless endeavors, waited upon Isaiah Thomas, who, he states, was not a relative, asking to take some of his almanacs to sell again. Mr. Thomas replied that he did not let his almanacs go, except to those of the trade. Mr. R. B. Thomas then began the publication of his own series. This was late in the last century, and the almanac is published now. I have read through and through the old almanacs by both Isaiah and Robert. My grandfather, in Barre, Mass., was for many years a subscriber to the Massachusetts *Spy*. The papers were preserved in the family with scrupulous care till 1834. Reading matter was scarce and costly in those days; and a large family of us made very thorough work of those archaiac journals. My mother told me that Isaiah Thomas borrowed from an uncle a Bible to use in his office, whether as "copy" or to correct "proof" with, she could not tell. Mr. Thomas in 1776 read the Declaration of Independence to an audience in Worcester; and in 1826 read it again the 4th of July. For several years Isaiah Thomas, Junior, published the *Spy*. My mother and her sister had each an octavo Bible of Mr. Thomas's printing; and their step-mother, a philosophy. In June, 1887, I rode

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from Chicago to Jacksonville, Ill., by way of Peoria. Passing rapidly through a town I saw the name of Isaiah Thomas conspicuous on a building to the left. I was curious to know more about it but did not find out the name of the town even. A. WILDER.

NEW EEGLAND ALMANACS. (Vol. VI, p. 268.) The following are some of the almanacs that have been published in New England, and now continued regularly, except the last named. There were many in the field during the last half of the last century and first half of the present century, and many of them of few years.

Daniel Robinson—Maine Farmers' Almanac, Hallowell, 1819-1883, Augusta, 1884-1889. Nos. 1-71. (Daniel Robinson, born April 8, 1777, died May 18, 1866, aged 89 years.)

Dudley Leavitt — Farmer's Almanack, Exeter, N. H., 1797-1823, Concord, 1824-1889. Nos. 1 93. (Dudley Leavitt born May 23, 1772, dled Sept. 20, 1851, aged 80 years.)

Robert B[aily] Thomas — Old Farmer's Almanack, Boston, Mass., 1793-1889. Nos. 1-97. Robert B. Thomas died May 19, 1846, age 80.

David A. Daboll—New England Almanac and Farmer's Friend, New London, Conn. 1773-1889, Nos. 1-117.

Isaiah Thomas — Massachusetts, Connecticut, Rhode Island, New Hampshire, and Vermont Almanack, Worcester, Mass., 1778-1802. (Isaiah Thomas, *Junior's*), 1804-18—. Isaiah Thomas died April 4, 1881, age 82.

GREATEST COLD ON RECORD. (Vol. VI, p. 252.) The greatest cold on record was at Jakontask, Liberia, January 25, 1829, when the thermometer marked 73° below zero. The extreme summer heat at Bengal and the African desert is 150° Fahrenheit.

MRS. L. T. GEORGE.

ROBBING PETER TO PAY PAUL. (Vol. VI, p. 252.) On the 17th of December, 1540, the abbey church of St. Peter at Westminister was advanced to the dignity of a cathedral by letters patent; but ten years later it was joined to the diocese of London again, and many of its estates appropriated to the repairs of St. Paul's cathedral.

"*Tanquam siguis crucifigeret Paulum ut redimeret Petrum.*"

"It is not desirable to rob St. Peter's altar in order to build one to St. Paul."

MRS. L. T. GEORGE.

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QUESTIONS.

1. Who is the *one* referred to in the following, taken from Dr. F. V. Kenealy's work, "The Book of God—The Apocalypse of Adam-Oannes," p. 18:

"The student who devotes himself to themes of this high nature, will do well to bear in mind the words of *one*, who was well capable of raising his sublime intellect to the most exalted purposes, but who was so misled by worldy shows that he sacrificed God and Heaven to the merest phantoms, and reaped what all such sowers reap, a life of sorrow, disappointment and disgrace." S. D. D.

2. What asterism is meant by *Tyshya*, in the following quotation: "When the sun and moon and the lunar asterism Tyshyr and the planet Jupiter are ino ne mansion, the *Age of Purity* shall come."

3. Why are the Roman numerals IIII usually put upon dials for the 4th hour instead of IV? JUNIOR.

4. Can any reader give any information relative to an old poem written on the occasion of one man selling a piece of land to another man and reserving the right "to raise one more crop"; and he sowed acorns to raise a crop of oaks, probably in revenge, or some freak? R.

5. When did the first emigrant ship leave England for any other country? D. M. DRURY.

6. What country has the greatest variety of coins in circulations? D. M. DRURY.

7. The assertion has very confidently been made by an intelligent gentleman that the well-known expression, "gone over to the majority," is incorrect, if it means to say that the dead of the earth outnumber the living. Can any reader cipher out an approximation in regard to this question? G. R. A., Albany, N. Y.

8. My name is James Pharaoh Mann. How should it be put in the phoneti spelling, in superscriptions for instance, James Ph. Mann, or James F. Mann? J. P. M.

9. What was the *name* of "The Village Blacksmith," celebrated in song by H. W. Longfellow? ORLEANS.

10. Who is "Parallax," the author of the work entitled "Earth not a Globe," or what is known as Zetetic Astronomy? ORLEANS.

11. Where does Carlyle say "The great lesson we all have to learn is obedience," or words to that effect? A. W.

12. Where can a quite full catalogue of the published writings of Thomas Lake Harris be found? AN ADMIRER.

13. Who is the person who writes and publishes under the name of *Sivartha* or *Sidartha*? Who is his publisher? HIERO.

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A Remarkable Vision

Showing the sudden and surprising appearance, the celestial mein and heavenly conversation of the departed spirit of MR. YEAMANS, late student at Yale College, to and with MR. H. GOODWIN, his friend and class-mate; tending to astonish, edify and instruct. "God speaketh once, yea twice, * * in a vision of the night." (Job xxxiii, 14-15). "I will meet thee at Philippi."—*Ghost of Brutus.* The second edition carefully revised and corrected by JAMES TREADWAY, who was personally acquainted with MR. YEAMANS, and MR. GOODWIN, and born in the same town with MR. YEAMANS.

The two persons mentioned in the following vision, I was acquainted with about three years in Yale College, in New Haven, Connecticut. MR. YEAMANS was born in Colchester, the same town that I was. He was a youth of an unblemished character, and very steady and religious, and his parents were wealthy and respectable. MR. GOODWIN also descended from respectable parents living in the town of Winterbury, in Connecticut, and appered to be a very sober and pious youth, the three years that I was acquainted with him, He acquired a good degree of learning while at college, and by his good conduct merited a good reputation, and the honors of college. He was licensed to preach the gospel by ministers of respectable character of the congregational order; and when he became a preacher, then it appeared more clear than before, that he loved God supremely; and being sensible of the dangerous situation that mankind were in by nature, he seemed to long for their salvation; and if I mistake not he was preaching on probation, when he was the subject of the following vision. I believe it is a fact that MR. GOODWIN was really awake, and his mind in regular order, when he beheld the appearance, and really heard such words proceeding from it; so that it is not a fictitious thing; but what the appearance really was I cannot say. I do not doubt but that it appeared to him, to be an exact representation to him of his class-mate MR. YEAMANS, both in his looks and voice. Let the words of the vision be spoken by whom they will, they are all real and important truths, and ought to be received and embraced as such.

Connecticut, April 4, 1795. JAMES TREADWAY.

TO THE READER: A short time before his death, MR. GOODWIN wrote the following epitaph for himself:

"How short, how precarious, how uncertain is life! How quick the transition from time to eternity! How soon the thread of life is spun! A breath, a gasp, a groan or two, and we are seen no more! Yet on this brittle thread (alarming thought!) hang a vast eternity!"

Died January, 1767, Æt. 27.

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THE REMARKABLE VISION.

In the night of the 25th of May, in the year 1764, about the hour of twelve, as I lay meditating in my bed on various subjects, I was suddenly alarmed by the opening of my chamber door; thither turning my eyes, to my great surprise and wonder, I beheld the appearance of my former friend and companion, MR. YEAMANS by name, who had been dead to the best of my remembrance about the space of four years, coming in at the door. His person seemed to be celestial and angelic, his countenance lustrous and shining, his garments white and dazzling, starred with glittering gold, with a crown of unsullied gold upon his head; his motion was slow and deliberate, and gesture pleasing and graceful, and in this heavenly pomp and splendor he came near to my bedside. "In the name of Almighty God, I demand of thee," said I, "on what important errand art thou come!" He replied, with a smiling countenance, "In the name of that Mighty God by whom you abjure me, I am come, not to terrify you with new revelations, but to renew our former acquaintance and conversation; to discourse on the great and important realities of the eternal world, and the happiness and glories of the heavenly state. Therefore, be not afraid. In heaven we enjoy the most perfect freedom and communion with the blessed God; there faith is followed in vision, and hope in fuition. There, the spirits of just men made perfect join the innumerable company of angels and archangles in singing anthems and doxologies of eternal praise to God and Christ, our exalted redeemer; there we are crowned with crowns of eternal honor, and decked with robes of brightest luster, forever shining forth like so many suns in the kingdom of our heavenly Father. Oh the glories! the ravishing glories of the heavenly world! Oh those blessed scenes of permanent and everlasting joy and delight! Here all tears are wiped away from our eyes; here we are entirely delivered from the molestations of the old serpent. There is nothing enters these peaceful regions that defileth, or that worketh abomination, or maketh a lie. There is not one spot or stain in the walls of the new Jerusalem. Not one sullied pillar in the upper temple of God. Not one jarring note in all the heavenly concert. Not one slumbering string, nor untuned harp is to be found there. Oh, sir, could your ears be unstopped, and the curtains of your eyes drawn, that the ravishing delights and entertainments of the heavenly world might at once pour their blended blaze on your astonished sight! Could you hear the loud hallelujahs that ring through the arches of heaven; the hosannas that proceed from every tongue, and the name, the blessed name of Jesus sweetly breathed in every accent. How your soul would leap in you for joy! How you would long, ardently long, to take wings and be gone hence, and be with Christ, which is far better. How you would long to be absent from the body, that you might be present with the Lord. Be-

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lieve me, sir, one moment, the happiness of heaven will more, infinitely more, than counter-balance all the riches, pleasures, or profits of this world. O the folly, the egregious folly, of silly mortals, who make the world their wonder, their gold, and their God; and their coffers their heaven. Can immensity be measured with a line? or an atom weigh down the boundless creation? As well may earthly pleasures yield satisfaction to an immortal mind. All the views and discoveries which you have here of the heaventy state, are but as through a glass darkly; but in heaven it is face to face, and there we know as we are known. Do not you remember, my dear friend, one night as we lodged together in a certain chamber, at the school of the prophets, the agreeable and delightful topic of our conversation was the glories and employments of the heavenly state? This was introduced, you doubtless remember, by a question I asked, namely, 'What St. Paul was doing in heaven?' Your reply was, 'If sorrow or tears there could be in heaven, I should think he would be weeping, not only over the churches to which he wrote, but also over apostatizing Britain and back-sliding New England; yea, and not only so, but he would wash this seat of the muses with a flood of tears.' This naturally turned our conversation upon the employment of saints and angels in heaven. But O how narrow were our views! How faint were our ideas! How feeble and glimmering were all our discoveries of the great and glorious things God had prepared for them that love him! Mortals are apt to start at the sound of death, and the more thoughtful of them go weeping to the grave. But no tongue can express the inconceivable joy I am the subject of. When I look into the grave, and behold my body rotting there, I know that by and by he who has the keys of death and hell, will unlock the prison of the grave. Then shall my body spring from the dust, fashioned like the glorious body of the Son of God, for which time I ardently long. Then shall my joy be complete. Yet a little while, and he that shall come, will come, and will not tarry, and I know that his reward is with him. He is at the door. Even so, come Lord Jesus. Come quickly."

Here he made a pause; when, being astonished at his heavenly language, I inadvertently replied, "You say the hour is at hand. When then shall the judgment be?" He replied with a stern aspect, "Hast thou never read the Bible? Is it not there said, "Of that day and hour knoweth no man; no, not the angels of heaven; but my Father only? I will therefore address you in the language of Christ: Watch, therefore, for ye know not in what hour your Lord cometh, whether at even, or at midnight, or at the cock-crowing, or in the morning; lest, coming suddenly, he find you sleeping."

"True," said I, "may the Lord enable me thus to do. But are you indeed in heaven?" He replied," Is this the habit of hell?"

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" Nay," said I, " but Satan can transform himself into an Angel of Light." " True," said he, " but where is his love ? If I instruct you in any thing contrary to what Christ and his apostles taught, then judge me accursed. No, sir, I am now surrounded with the heavenly host, though they are concealed." Then he broke out in the highest strains and raptures of joy: " Hallelujah, hallelujah ? Blessing, and honor, and power, and glory be to him that sitteth upon the throne, and to the lamb for ever and ever, who hath redeemed me to God by his blood. Who hath brought me up out of the horrible pit ; out of the miry clay. Who hath established my goings, and put a new song into my mouth, even praise to the Lord ! Hallelujah. Glory ! Glory to God in the highest. That I have joy in heaven, joy unspeakable and full of glory." " Do not you," said he, " see this crown of unsullied gold upon my head ? these garments of burnished gold pure and white ? I have a crown incorruptible in the heavens ; a crown of glory which can never fade away ; a kingdom which can never be moved."

" O thou subject of eternal glory," said I, " happy indeed art thou. When shall I be partaker of the same joy ? When shall it be ? "

" For this," said he, " you must earnestly watch and pray, and wait the good pleasure of God, until the blessed moment shall come."

" Let me embrace you," said I, " my dearest companion." Said he, " Is not my body in the dust ? Hath a spirit flesh and bones ? I must deliver you my message and begone. Search the Scriptures; in them think you you have eternal life. They are able to make you wise unto salvation. I am not come to deliver you things that have not been told ; to confirm to you the reality and divinity of God's word ; for if you believe not Moses and the prophets, neither would you believe though one should rise from the dead. Make the word of God the rule of your life ; the standard and directory of all your conduct. Yield not to the false insinuations and vain amusements of a delusory world, for they will lead to the snares of death. But pursue the dictates of reasons and the oracles of everlasting truth. Bonds and afflictions may abide with you on earth. Let not these things move you ; but see to it that you have a testimony of a good concience, that in simplicity and godly sincerity, not by fleshly wisdom, but by the grace of God you have your conversation in the world. For if God be for you who can be against you. Account not the sufferings of time worthy to be compared with that glory which shall hereafter be obtained by the godly and pious. Account all things but loss for the excellency of Christ Jesus, and that you may be found in him at last, not having on your own righteousness, which is of the law, but that which is of God by faith. Study truth and honesty, and as far as in you lies, live peaceably with all men. Place not your hope in uncertain riches, for they will take to themselves wings and fly away. Realize the truth you inculcated in your last

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sermon, that you must die. Live as if you expected every moment would be your last. Observe the words of your text, 'It is appointed unto men once to die, but after this the judgment.' Your thoughts were just, when you said, 'Who would regret the loss of a stiver, when in pursuit of a crown? or a cottage, when about to obtain a kingdom? That there is no more proportion between the pleasures of this life and those of godliness, than there is between a feather and a mountain of gold.' Give up your whole soul to God and the interest of religion, and let your will be swallowed up in the will of the Most High. You have begun a good work, you have entered upon the gospel ministry. I congratulate you upon your noble undertaking. May you prosecute the work, and see to your abundant joy and rejoicing, the pleasure of the Lord prosper in your hands."

Here I interrupted him, and said, "If this be the will of the Lord, whence then this weakness of the eyes, as well as the want of other qualifications? Who is sufficient for these things?" "It is not," said he, "for us to pry into the eternal counsels of God; His grace is sufficient for you, and his strength may be made manifest in your weakness. The preaching of the gospel is the most noble employment of life; and if your judgment be with the Lord, and your work with your God, you shall not only shine as the brightness of the firmanent, but as the stars forever and ever. See, therefore, that you preach Christ Jesus, and him crucified; and be filled with the blessing of the gospel of peace. Appear valiant in the cause of God; and fear not what men shall say or do unto you. How do the ways of Zion mourn, because of the few travelers that walk therein? How doth the virgin daughter of the Lord's people sit solitary, none to comfort her under all her afflictions. O ye protestant powers! though your doctrines in general are good, yet, how have you swerved from your profession by unhallowed and unsanctified lives? Repent and do your first work, or God will come unto you quickly and remove your candlestick out of its place. My dear friend," continued he, "now you are in the bloom of youth, exert your influence with your co-workers; for your observation was true, 'That the habits of sin will grow stronger and stronger.' Yet I must blame you for not prosecuting your advice to youth still further than you did. For it is a matter of the utmost consequence. Youth is the most favorable and advantageous season in which to devote ourselves to God. O the follies and vanities of youth! Do they imagine they shall never die? Let them think on me. Where is my body now? And where may theirs soon be? Let me remind you of another phrase of yours. 'Should I speak unto you from the bottom of the tombs, saying, I have gone before; my days are numbered and finished, and you shall soon be with me; would you not regard it?' But, sir, I must bid you adieu. May you go on and prosper, serve God, and your generation faithfully, by the will of the Most High; then fall asleep in Jesus, and

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your spirit take wings to the mansions of eternal glory, to join the innumerable company, and multitude of angels and spirits of just men made perfect, in celebrating the praises of electing love, and redeeming grace forever and ever."

He then closed his hands and cast his eyes to heaven and said: "O thou Almighty Sovereign of the universe, thou Lord of angels and men! look down on earth and support the dying cause of the world. Hasten, blessed Jehovah! hasten the happy time when thy gospel shall run and thou be glorified from sea to sea, and from the river to the end of the earth. O thou Mighty Immanuel, thou Prince and Saviour of the world, ride through the earth in triumph, conquering and to conquer. Bring in thine elect from the four winds, that Zion may become a praise and a glory in the face of all the earth." He then with a low and gentle bow, said, "Sir, I hope ere long to meet you in heaven, where we shall spend an eternity in the blessed company and society of each other; and swim in those rivers of pleasure, which issue from the throne of God, and flow at his right hand forever more. Farewell." He then turned about and departed out of my chamber, and was seen no more.

[This vision is reprinted by request from the second edition of a now very rare copy of the remarkable vision printed at Amherst, N. H., nearly one hundred years ago.]

CORRECT NAMES OF SOME AUTHORS. Here are a few interesting points of information as to the names of literary men:

Wilkie Collins is really William Wilkie Collins.

Austin Dobson was baptized as Henry Asstin Dobson.

Muurice Thompson ten years ago was James Maurice Thompson.

Brander Matthews's whole name is James Brander Matthews.

Laurence Hutton's whole name is James Laurence Hutton.

Henry Rider Haggard is the full name of the author of sensational novels.

Slason Thompson, editor of *America*, has within ten years dropped his first name, Alexander.

Joaquin Miller is really Cincinnatus Heine Miller.

Edmund William Goose and Edgar William Nye would scarcely be identified by their real names.

Julian Hawthorne has not for twelve years used his historic middle name Crowninshield.

Francis Richard Stockton is now known as Frank Stockton.

Charles Egbert Craddock is Miss Murfree.

Bayard Taylor's first name was James.—*Chicago News.*

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

" *Who knows not Circe, the daughter of the Sun ?* "—MILTON.

VOL. VI. NOVEMBER, 1889. No. 11.

NEW (OLD) WORDS. A student at a public examination read a singular verbose paper on " the parts of speech," claiming that it was proper and correct to turn all proper names into adjectives, as Skakespearean, Baconian, Andrusian, Websterian, etc., but proper names can also be used adverbially, as Socratically, Demosthenically, Byronically, etc., and said such were sanctioned by good usage, referring to Hermes. What Hermes does he mean ? A LISTENER.

Undoubtedly the student referred to the grammar of John Harris, as he shows that such license may be taken in the use of words; Mr. Harris even examples the two words, " Socratically," " Demosthenically," (and also, " Cyclopically " citing it from Aristotle), page 73. There are several works entitled " Hermes :

" Hermes ; or A Philosophical Inquiry concerning Universal Grammar." By John Harris. Three books in one. 8vo. pp. 152. London, 1816.

" Hermes Scythicus ; or, The Radical Affinities of the Greek and Latin Languages to the Gothic, illustrated from the Moseo-Gothic, Anglo-Saxon, Francic, Alemannic, Suio-Gothic, Islandic, etc. To which is prefixed a Dissertation on the Historical Proofs of the Scythian Origin of the Greeks." By John Jamieson. 8vo. pp. 368+XIV. Edinburgh, 1814.

" The Pastor of Hermas." Also called his Visions. One of the books in the Apocryphal New Testament, containing three divisions—Visions, 4 chapters ; Commands, 12 chapters ; Similitudes, 10 chapters. Two opinions prevail as to it authorship ; one is that it was Hermas mentioned in Romans XVI, 14 ; the other is that it is the production of Hermas, brother of Bishop Pius of Rome.

Hermes Trismegistus (" thrice-greatest.") " The Divine Pymander." Several translations of this work have been made. (See N. AND Q., Vol V, p. 44. March, 1888.)

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A Curious Property of Prime Numbers.

(By T. S. Barrett, London, Eng.)

—o——o—

There is a remarkable property of all prime numbers (excepting 1 and 2) not possessed by other numbers. To explain, it will need a few introductory words.

*																								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1		2		3		4		5		6		7		8		9		10		11		12		13
1			2			3			4			5			6			7			8			9
1				2				3				4				5				6				7
1					2					3					4					5				
1						2						3						4						5
1							2							3							4			
1								2								3								

Write down, as in the top row, contiguously, as many consecutive numbers as may be desired, commencing with unity. Repeat them in the next row, with one vacant cell between each; in the third row, with two vacant cells between each; and so on *ad libitum*. If we now imagine some object (a chess-man, for example) to start from the corner cell at the top marked with a star, and to travel along any of the paths indicated by the figures, it will be seen that each path is distinct and well defined. If it travels downward along the cells occupied by 1, the path is a column. If it goes from 2 to 2, the route is a diagonal. If it jumps to a 3 in the top row, thence to the three in the next row, and so on, the path is a "knight's move." Similarly with the other numbers. We may distinguish the different paths by calling them No. 1 path, No. 2 path, No. 3 path, and so on.

Now if we select any prime number, and strike out from the diagram all numbers greater, and divide the whole perpendicularly into sections, each containing as many columns as numbers chosen, the various sections may be superimposed without confusion,—every num-

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ber in the outside sections falling into an empty cell, excepting when the number of the row corresponds to the prime number selected, or any of its multiples. To make this clearer, let us take the number 7, and cancel all numbers greater. Then our first section will be up to and including the column with 7 at the top ; the next will be from the column, previously with 8 at the top, up to aud including the column that was headed by 14. And so on.

1	2	3	4	5	6	7
1	5	2	6	3	7	4
1	6	4	2	7	5	3
1	3	5	7	2	4	6
1	4	7	3	6	2	5
1	7	6	5	4	3	2
†						
1	2	3	4	5	6	7

The above is the arrangement in the first section of all the outside numbers greater than 7. I have supposed that the diagram has been continued far enough to fill the above ; but the principle is just the same. Thus the 5 in the second row of the first diagram being in the second column of the second section, must be transferred to the corresponding cell of the first section. It falls into the vacant place between the 1 and the 2. The 6 in the same row falls for the same reason, into the vacant place between the 2 and 3. Similarly with the third row. The 4 being in the third column of the second section,

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has to be transferred to the corresponding cell, and falls into the vacant place just before the 2 in the third row. Similarly with the 5. The 6 in the same row is in the second column of the third section, and therefore falls into the vacant cell between the 1 and the 4. In the same way with all the other rows, until we come to the seventh, which corresponds with the chosen prime number. Then the numbers in that row instead of falling into vacant places, all crowd into the cell we have indicated by a dagger. After that the rows are repetitions of what has been given above; the first and eighth being alike, and so on.

Many curious things may be observed in the above diagram; and all others made similarly from other prime numbers. If we obliterate the column with 1 in it, and also the dagger row and all beneath it, we have remaining a very curious square; these are among its other properties: all numbers equally distant from the center, both in rows and columns, add the same, namely, 9 (or the prime number plus 2). Every column and every row contains all the numbers from 2 to 7; and the diagonals consist only of 2 and 7. Now, if we have any square consisting of cells, the root being a prime number, we may deduce from the foregoing facts one having a bearing on magic squares with odd roots. If we cancel the last row of the second diagram, as well as all the numbers in it, we get an empty square remaining, which we may proceed to refill with the figures in another way. We may proceed from the cell marked with a dagger and completely fill the square with figures along different paths, without any collision. Thus, we may fill the lowest row by proceeding in a horizontal direction. Let us fill it with ciphers and call it the "zero path." We may proceed in an upward direction and fill the first column. This will be the No. 1 path. Diagonally we may proceed along the cells occupied by the figure 7. This is No. 2 path. Then we may fill in along the No. 3 (on the "knight's") path. We may put a 3 (for example) along this path, and it will occupy the cells where the 6 was; and so on. The root of the square being 7, we may thus fill the square with figures along 8 different roots, always 1 more than the root of the square. It must be observed that when a path runs off at the right side of the square, before the top row has been reached, the figure must be brought back within the square, in a similar manner to that already explained when superimposing the sections of the first diagram.

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Thus, take the figure 6 in the first diagram, the figure at the end of the fourth row. The path taken by that number being No. 3, it would bring us, if there were more cells to the right, into the second cell of the fourth row. Hence the next cell to be filled must be the corresponding cell inside the square.

Now, many writers on magic squares, especially M. de La Hire, must have had an idea of these properties ; but the credit of the discovery is generally conceded to the Rev. A. H. Frost of Nasik, in India. He pointed out that M. de La Hire's method of making odd-root magic squares necessarily follows from these properties of the "paths."

A.

1	2	3	4	5
3	4	5	1	2
5	1	2	3	4
2	3	4	5	1
4	5	1	2	3

B.

10	20	30	40	50
40	50	10	20	30
20	30	40	50	10
50	10	20	30	40
30	40	50	10	20

Thus, in the square A, all the numbers are in No. 3, or the "knight's" path. Take the 4 in the bottom row, and thence to 4 in the row above, and so on. The 2 and 3 run off at the side, and are brought back within the square. Now the square B, on the other hand, has its numbers connected by the "No 4. path." Notice from 40 to 40 for instance. Consequently the differences between the numbers in square B, being *not less* than 5, a magic square is necessarily produced. For we have already seen that where prime numbers are concerned, the different "paths" never clash except in one spot. Therefore, one square being in "No. 3," and the other in "No. 4 path," any two numbers once united will never meet again in the same square. Thus, for example, the 3 in the one square and the 20 in the other meet on superposition once and once only. If they met oftener, or not at all, the combined square would not be magic. There is another property of these "nasik" magic squares, whose roots are prime numbers.

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The magic summation may be counted along any "path," excepting those two paths chosen for the primary squares. The square of 5 can only have 6 paths, namely, the horizontal row, the perpendicular column, two diagonal or slanting rows in opposite directions, No. 3, and No. 4 paths. But as the two latter have to be chosen in a root-5 square, for the primary squares, the magic square of 5 cannot have its summation in any route excepting rows, columns, and diagonals. But in the square of 7 below, which may have two more paths than the 5 square, summation may be made along two additional ways.

11	22	33	44	55	66	77
56	67	71	12	23	34	45
24	35	46	57	61	72	13
62	73	14	25	36	47	51
37	41	52	63	74	15	26
75	16	27	31	42	53	64
43	54	65	76	17	21	32

(By the bye, there is a curious feature in this square not often met with, following from the way I have made it. If every number has its figures (*e. g.* 14 changed into 41, 32 into 23, and so on), the square remains magic.)

The above magic square not only sums 308 in the usual ways, but if the numbers according to No. 3 path (or "knight's move") be taken, likewise those along No. 4 path, they will likewise sum 308. But care must be taken that in making these moves that no row is

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passed over, and that we move from left to right. Thus if we start from 76 in the middle of the last row, we may proceed to 53, then to 57, then to 14, and so on. But if we go to 74, or to 16 (both knight's moves), we shall not get the magic summation 308.

Thus, $76+53+37+14+61+45+22=308$.
But, $76+74+72+77+75+73+71=518$.
And, $76+16+26+36+46+56+66=316$.

Starting at any other number at random will give the magic summation, if the "knight's move" is correctly taken. * Similarly, with No. 4 path, proceeding from left to right, without passing over any row ‡. Another property of all these "nasik" squares is one I have already explained in the memorandum on the 20-root square, namely, the property I called "diagonally-nasik." A property of all diagonally-nasik squares is that the first column may be taken from its place and put after all the others (and vice versa), without destroying the magic properties. Similarly, the top row may be removed to the bottom (and vice versa); and a great many changes made in the arrangement of the numbers thereby, without destroying the magicality.

"Oddly-even" magic squares can never be made *nasik*, nor even diagonally-nasik; and "evenly-even" squares, and those whose roots are multiples of 3, can be made the latter only. With care nasik squares may be made when the root is a product of prime numbers, provided 3 is not one of the factors.

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* Thus, $43+27+74+51+35+12+66=308$
$54+31+15+62+46+23+77=308$
$65+42+26+73+57+34+11=308$
$17+64+41+25+72+56+33=308$
$21+75+52+36+13+67+44=308$

‡ Thus, $43+31+26+14+72+67+55=308$
$54+42+37+25+13+71+66=308$
$65+53+41+36+24+12+77=308$
$76+64+52+47+35+23+11=308$
$17+75+63+51+46+34+22=308$
$21+16+74+62+57+45+33=308$
$32+27+15+73+61+56+44=308$

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Questions and Answers.

THE DELUGE. (Vol. VI, p. 284.) The deluge was threatened in the year of the world 1536; and began Dec. 7, 1656, and continued 377 days (Gen. VI to VIII). The ark rested on Mount Ararat May 6, 1657; and Noah left the ark December 18, following. The following are the epochs of the deluge, according to Dr. Hales:

Septuagint,	B. C. 3246	Clinton,	B. C. 2482
Jackson,	3170	Playfair,	2352
Hales,	3155	Usher and Eng. Bible,	2348
Josephus,	3146	Marsham,	2344
Persian,	3103	Petavius,	2329
Hindoo,	3102	Strauchius,	2193
Samaritan,	2999	Hebrew,	2288
Howard,	2698	Vulgar Jewish,	2104

In the reign of Ogyges, king of Attica, B. C. 1764, a deluge so inundated Attica, that it lay wasted for nearly 200 years. This is the account according to Blair.

Buffum thinks that the Hebrew and Grecian deluges were the same, and arose from the Atlantic and Bosphorus bursting into the valley of the Mediterranean. The deluge of Ducalion, in Thessaly, is placed B. C. 1503, according to Eusebius. It was often confounded by the ancients with the general flood; but considered to be merely a local inundation occasioned by the overflowing of the river Peneius, whose course was stopped by an earthquake between the mounts Olympus and Ossa. Ducalion, who then reigned in Thessaly, with his wife Pyrrha, and some of their subjects, are stated to have saved themselves by climbing up Mount Parnassus.

A general deluge was predicted in 1524, and arks were built; but the season happened to be a fine and dry one.

MRS. L. T. GEORGE.

MASCOT. (Vol. V, p. 86; VI, 314.) Mascot or mascotte is a diminutive form of masca, which may be originally Arabic, German, or Latin. The word "masca," meaning witch, occurs as early as 643 in the laws of the Lombards. "La masque" means witch in French, and in Persian-French mascotte, probably borrowed from the provençal, means anything which a superstitious player thinks is lucky. It

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may be a cent with a hole in it, or a button. It may be contact with a lame man. The word reached this country with the opera where the leading character is a mascot — a child of luck — and now every base-ball club has its mascot, which may be a cat, a dog, or a boy.

From the original meaning of witch, to the secondary meaning of being favored by fortune or possessing certain luck-giving qualities, the change is simple. MRS. L. T. GEORGE.

MARRIED WOMEN TAKE THEIR HUSBAND'S SURNAMES. (Vol. V, p. 96.) This was a Roman custom. Thus Julia, Octavia, etc., married to Pompey, Cicero, etc., would be called Julia of Pompey, Octavia of Cicero. Our married women sign their names in the same manner, but omit the "of." MRS. L. T. GEORGE.

PURPLE, AN IMPERIAL COLOR. (Vol. V, p. 96.) Purple, a mixed tinge of scarlet and blue, discovered at Tyer. It is said to have been found by a dog having by chance eaten a shell-fish called *murex*, or *purpura*. Upon returning to his master, Hurcules Tyrius, he observed his lips tinged, and made use of the discovery. Purple was anciently used by the princes and great men for their garments. It was restricted to the emperor, by Justinian (I, 552), and *porphyrogenitus* attached to the names of some emperors signifies "born to the purple." The claim of Demetrius to the vacant throne was justified by the trite and flimsy sophism, that he was born to the purple, and the eldest son of his father's reign. This account is from Gibbon. Hence, imperial, royal; so called from the color having been a distinguishing token of imperial authority. MRS. L. T. GEORGE.

SEVEN GOLDEN CITIES. (Vol. V, p. 96.) They are situated on an imaginary island, and were the subject of one of the popular traditions concerning the ocean, which was current in the time of Columbus. The island is represented as abounding in gold, with magnificent houses and temples, and high towers that shone at a distance. The legend relates that at the time of the conquest of Spain and Portugal by the Moors, when the inhabitants fled in every direction to escape from slavery, seven bishops, followed by a great number of people, took shipping, and abandoned themselves to their fate upon the high seas. After tossing about for some time, they landed upon an unknown island in the midst of the ocean. Here the bishops burned the ships to prevent the desertion of their followers, and

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founded seven cities. This mysterious island is said to have been visited at different times by navigators who, however, were never permitted to return. MRS. L. T. GEORGE.

THE FIFTEEN O PRAYERS. (Vol. VI, p. 300.) "The Fifteen O's" are fifteen prayers beginning with the letter O, meaning Our Lady. The Virgin Mary is so called in some old Roman rituals, from the ejaculations at the beginning of the seven anthems preceding the "Magnificat," as "O when will the day arrive?" "O when shall I see?" "O when?" and so on. (See "Horæ Beatissimæ Virginis Mariæ.") MRS. L. T. GEORGE.

According to the work of Daniel Smith entitled "Cuneorum Clavis, The Primitive Alphabet and Language of the Ancient Ones of Earth," page 13, during the excavations at Nineveh or Nimroud, and Kouyunjik, the excavators came across what they called a "Royal Library," a chamber filled with small clay tablets about 9x6 inches and under. These are now in the Kouyunjik museum. The fifth tablet in the second glass case on the right contains a list of phrases or short prayers arranged precisely with the same letters and in the same order, and what is very remarkable, the first fifteen phrases are short prayers beginning with O in the translation, just as we have our Hebrew copy of the 119th Psalm, eight verses beginning with A (aleph), eight with B (beth), eight with G (gimel), and so on through the Hebrew alphabet. The prayers are deeply interesting, showing us plainly that the Assyrians were not such idolaters as they are generally represented, but that they had not only a knowledge of the true God, but also that they had an earnest desire to know more of him. Take the two following prayers as examples:

"O! that I could adopt some method of explaining the apparent changes, the mysterious movements of the true God, and the purport of those mutations."

"O! it is my desire to embrace the beauty of the true God, and not break entirely with the obligations of the people."

Such is the sense elicited, not by 300 letters and 500 variants; not by the cumbrous machinery of homophones, polyphones, determinatives, and ideographs; but by the simple application of nineteen letters. All can be now read; and as Solomon said, that "*there is* no new *thing* under the sun," so the original of Caxton's original in the

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British Museum, is written upon clay between three and four thousand years anterior to Caxton.

The author gives a specimen of the English orthography A. D. 1349, or 540 years ago, and says he questions whether the Hebrew language had undergone such a change up to A. D. 1, as our English language has uudergone up to this time.

His specimen is from Matthew VI, 6-8 :

" But whenne thou schalt preye, enter into thi couche and whenne the dore is schet, preye thi fadir in hidils, and thi fadir that seeth in hidils, schal zelde to the.

" But in preying nyle zee speke mycbe, as he:hene men doon, for thei gessen that thei ben herd in her myche speche.

" Therefor nyle ze be maad lich to hem, for zour fadir woot what is nede to zou, bifore that ze axen him."

WORD JEHOVAH OR YAHVA. (Vol. I, p. 282 ; V, p. 152.) Why is the word Jehovah, said to be omnific, incommunicable, unpronounceable, unutterable, etc., and where is it so stated in the Bible ? OSMON.

The " incommunicable name " *is* mentioned, as such, in the Bible (in the Apocrypha) Wisdom XIV, 21. and is alluded to in various other places (Ex. VI, 3 ; Ps. LXXXIII, 18 ; Is. XII, 2 ; XXVI, 4). Several times hyphened in Hebrew (Jehovah-Jireh, Gen. XXII, 14, " The Lord will provide " ; -Nissi, Ex. XVII, 15, " The Lord is my banner " ; -Shalom, Jud. VI, 24, " The Lord gives peace "). Twice in translation only (Jehovah-Shammah, Ezek. XLVIII, 35, " The Lord *is* there ; " -Tsidkenu, Jer. XXIII, 6 ; XXXIII, 16, " The Lord our righteousness "). Twice by Shaddai in name of men (Ammi-shaddai, " People of the Almighty," Num. I, 12 ; II, 25. Zuri shaddai, " My rock is the Almighty," Num. I, 6 ; II, 12).

To give the exposition of the several pronunciations of the name, and why " incommunicable " we have not room here, but will refer this new correspondent to some literature on the subject which he should read and which will greatly enlighten him.

" What is the Shem-hammephorash," NOTES AND QUERIES, Vol. II, pp. 7-9. " The Staff of Adam, and the Shem-hammephorash," Vol. IV, pp. 345-364.

" The Tetragrammaton," by A. F. Chapman. 8vo. pp. 22 ; Boston, Mass, September, 1872.

" A Contribution to the History of the Lost Word," by Rev. J. F.

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Garrison. 8vo. pp. 28; Philadelphia, Pa. 1877. (From "Antiquities of Freemasonry," by Geo. F. Fort. Philadelphia, 1877.)

"Recent Theories on the Origin and Nature of the Tetragrammaton," by S. R. Driver. 8vo. pp. 20; Oxford, 1885.

"On the Tetragrammaton," in the *Luminous Unity*, pp. 18-45, by Rev. M. R. Miller. 12mo. Philadelphia, 1874.

"The True Pronunciation of the Divine Name Jahvah - Jehovah," by Russell Martineau. 8vo. London.

ELIOT'S INDIAN BIBLE. What is the full title-page of Eliot's Indian Bible? JOHN.

According to Henry A. S. Dearborn who wrote a "Sketch of the Apostle Eliot," it is

"MAMUSSE WUNNEETUPANATAMWE UP-BIBLUM GOD NANEESWE NUKKONE TESTAMENT KAH WONK WUSKU TESTAMENT. NE QUOSHKINNUMUK NASHPE WUTTINNEMOH CHRIST NOH ASOOWESIT JOHN ELIOT. CAMBBRIDGE SAMUEL GREEN KAH MARMADUKE JOHNSON. 1663."

"A HAWK AND A HANDSAW." Where does the phrase come from? LOGOS.

A passage in Shakespeare's Hamlet seems to allude evidently to the hawk and hoop, or hoopee, of Egypt. Hamlet says, "My uncle-father and aunt-mother are deceived." G. "In what, my dear lord?" Ham. "I am but mad north-north-west: when the wind is southerly, I know a hawk from a handsaw." Thomas Capell, editor of the Oxford edition of Shakespeare, changed "handsaw" to "hernshaw," which renders the passage intelligible. ("Hamlet," Act II, Scene II.)

THE SMALLEST REPUBLIC, This is not San Marino, nor Andorra, nor Moresnet, but the tiny Republic of Goust, in the Pyrenes, which contains less than one hundred inhabitants, all of whom are Romanists. The sole occupation of these people is the weaving of wool and silk. Their government consists of an assembly of old men called the council. They pay no taxes nor imposts of any kind, and therefore have no need of collectors. They have neither mayor, priest, nor physician. They baptize their children, bury their dead, and perform their marriage ceremonies all beyond the boundaries of the town, or in the neighboring village of Laruns. If any one wishes to marry a wife he must go away from home to find her. Among the peaceful residents of this microscopic republic are several centenarians. No one is really poor, and none are rich. The language which they talk is a mixture of French and Spanish, and their numbers, and manners, have remained unchanged for several centuries.—*Frankfort Times.*

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THE PHŒNIX. (Vol. VI, pp. 236, 246, 253, 298.) I have been much interested in the fabulous history of the phœnix; but there is another and more plausible explanation to the story. John Goodridge wrote and published a book, in 1781, entitled :

"The Phœnix, an Essay; being an attem pt to prove from history and astronomical calculations, that the Comet, which by its approximation to our Earth, occasioned the change made at the Fall, and at the Deluge, is the Real Phœnix of the Ancients."

This is a duodecimo book of 74 pages, illustrated, divided into seven sections. Sections 1 to 4 are a discussion of comets in general. Sections 5 to 7 give his theory of the comet's appearance at the Fall, at the Deluge, and that it will appear again in its regular visit in 2250, when the great conflagration will take place—the end of this world—and the Millenium will begin. The period of the comet's visit near this mundane sphere is 575, or a trifle less ; this agree sapproximately with the age of the phœnix, whose age is generally set at 600 years, though a few say 500 years. From Adam to Noah the comet made three visits, the time being about 1725 years. Chronologists generally assign 1656 years from the creation to the flood. Mr. Goodridge says the comet's period may have been a trifle shorter than now from disturbing influences. Some chronologists make the time more than 1656 years; Josephus makes it 2256 years ; and the Septuagint makes it 2262 years. Mr. Goodridge finds by records that the comet appeared B. C. 44 ; next, A. D. 531 (according to Leibnitz and Zonarus) ; next, it appeared in 1106 (according to Leibnitz and Hevelius) ; the last appearance was in 1680, when it was observed by Newton, Halley, Flamstead, and other astronomers ; the next appearance will be about 2250, when it will come sufficiently near the earth to cause the great conflagration. The theory is a curions one. G. S. C.

THE HEBREWS. From whom do the Hebrews take their name?
JOHN L. SAMUEL.

Josephus says (Antiquities, Bk. I, chap. VI, sec. 4) that the son of Arphaxad was Heber, "from whom they originally called the Jews *Hebrews*." Abram is the first person called "the Hebrew," in King James' version ; the Septuagint is *perates*, and means "the passenger," that is, Abram, the passenger, who had lately passed over the river Euphrates. "The Encyclopædia Britannica" (Scribners' ed.), article "Hebrews," says the word means *crosser*, he who crossed over.

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"CLEOPATRA'S SOLILOQUY." Who wrote the poem, "Cleopatra's Soliloquy"? SARAH E. BURNS.

The author of this passional poem is Mrs. Mary Bayard Clarke, wife of Judge Clarke, of Newberne, N. C. It was written as a "pen-picture" of a painting of the "Star-eyed Egyptian," on exhibition in New Orleans. Her husband would not let her publish it till she was over fifty years of age, when it appeared in the *Galaxy*, April, 1877. The edition of the *Galaxy* was soon exhausted, and a hundred copies of the poem were privately printed by a New York lady and distributed to friends, among whom was Rose Eyting, who was then playing the character of Cleopatra in Chicago. Later the poem was printed in the New York *Sunday Mercury*. It appeared in the *Argonaut* Christmas Annual for 1881, with several other poems devoted to "the glorious sorceress of the Nile." The poem, with a fine tribute to the author, appears in a handsome volume of "Pen Pictures," gathered, written, and published in 1888, by Cynthia Leonard,—dedicated

"To the great throbbing heart of humanity, whether it beat with love and appreciation of all things pertaining to the grandeur of the age, in science, art, literature, or the great attainments in mechanical genius—or the heart that throbs in sympathy for the ills, misfortunes, and intense sufferings that daily increase in our midst; to this great human heart I dedicate this little effort."

"A BIPED WITHOUT FEATHERS." (Vol. VI, p. 332.) Plato is reputed to have defined *man*, the *anthropos*, as a "biped without feathers." Those who set the story going, also add, that Diogenes, the cynic, plucked a cock and exhibited it at the Akademeia, with the words, "Behold, here is Plato's man." A. WILDER.

SOLUTION TO THE KNIGHT'S TOUR PROBLEM. (Vol. VI. p. 315.)

"As knight upon the checquered board
From square to square leaps boldly on,
As fiercely on the Persian horde,
Down poured the Greeks at Marathon.
So may each youth who reads this lay,
Press firmly onward to the fight,
And through life's long hard battle day,
Still strike for freedom and the right."

First correct solution received from Miss M. J. McAllister, Manchester, N. H. Second, L. H. Aymé, Chicago, Ill. Third, Mrs. L. T. George, Chicago, Ill. Fourth, M. N. Robinson, Lancaster, Penn. Fifth, John M. Richardson, Daingerfield, Texas.

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Waste-Basket of Words.

[From Journal of American Folk-Lore, Vol. II, No. V, 1889.]

Alibo.—In the "Autobiography of Henry Tufts," p. 117 (Dover, N. H., 1807), he says: "To prove an *alibi* (not *alibo*)." Does the word "alibo" occur elsewhere?—T. W. Higginson, Cambridge, Mass.

Briggle.—To be in an uneasy mental condition, to shift the attention rapidly from one thing to another. "Don't briggle so." In commom use in Ohio.—Fanny D. Bergen, Cambridge, Mass.

Briggly.—Adjective of the foregoing. Expressive of mental and physical restlessness.

Coast.—In confirmation of the conclusion, noted in previous numbers, that this word, in the sense of skipping over the snow on a sled, was originally confined to the local dialect of Boston, it may he mentioned that, as shown by careful inquiries, the term was entirely unknown in Salem, at a distance of sixteen miles on one side, as well as in Plymouth, removed thirty miles on the other.

Mowkie.—A louse, as I have heard the word employed in Boston. (E. F. Child, Cambridge, Mass.) Doubtless an old English word, although not found in the glossaries, and connected with the German Mücke (English midge), a fly, a gnat. It might be guessed that it once had this signification, and was euphemistically used for louse; in support of which it may be mentioned that at the present day, in rural districts of New England, the term *bug* is so employed,—to say *louse* being considered objectionable and vulgar.

Pass.—In New England the ordinary term used to express the throwing and catching of a ball by two or more persons is *pass*. "Let's go out and *pass*." In New York and Pennsylvania the verb is *catch*. "Let's go out and *catch*." The noun also is *catch*.—W. H. Garrison, Philadelphia, Pa.

Pixilated.—Lost, bewildered, confused. A local term of Marblehead. For example, when an oarsman has been negligent: "We'll be pixilated 'n' driven on th' rocks an' ye don't wake up." (From the novel "Agnes Surriage," by E. L. Bynner, Boston, 1887, p. 56.) The word, no doubt, is the same as the obsolete English *pixy-led*, that is, misguided by a fairy. *Pixy* is a form of Puck (by derivation meaning simply a little one, a boy; see "Grimm's Mythology"), part of whose business or pleasure, as we read in "Midsummer Night's Dream," is to "Mislead night wanderers, laughing at their harm."

Roomthy.—This good old word, of which the dictionaries quote examples from Drayton and Fuller, is used by Judge Sewell. "His (Mr. Edward Taylor's) very roomthy and good new meeting-house." (Diary, Vol. III, p. 319.)—H. W. Haynes, Boston, Mass.

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QUESTIONS.

—o—o—o—

1. Who is the author of, and where found, the following lines? A. F. C.

> "Bright was the hour
> When Israel's Princes, in their pride and power,
> Knelt in the temple's court, the living flame,
> The accepted sacrifice to all proclaim.
> Brightly the splendor of the Godhead shone,
> In awful glory from his living throne;
> Then bowed was every brow, no human sight
> Could brave the splendor of that flood of light
> That veiled His presence,—and His awful form,
> Whose path the whirlwind is,—whose breath the storm."

2. Are there more than three words in the English language that end with *ealth?* Namely, health, stealth, and wealth (commonwealth and wealth considered the same). LOGOS.

3. What were the names of the three mountains, or hills, from which Boston (Tri-mountain) was formerly called? A lecturer referred to them as Beacon Hill, The Highlands, and Mount Auburn. Was he correct? BEACON.

4. Who were the Cabiri mentioned so often by classical authors? J. E. B.

5. Is there anywhere published a bibliography of the writings and speeches of Daniel Webster; also, of Charles Sumner, and Theodore Parker? COLLECTOR.

6. William Cuninghame author of a work on "Chronology of the Scriptures," 1839, claimed to have discovered a new equation which he called the "Trinal Fraction." It is stated to be as follows:

$$\frac{a+a^2+a^3}{a} = x$$

He states that it is an important factor in the solution of many of the chronological cycles, eras, etc. Will some one explain how, by an example? TYRO.

7. Who adopted the spelling of the new State to be *Dakota*? It is well known that Longfellow in his "Hiawatha," and others, have spelled the word *Dacotah*. OBSERVER.

8. Why was the Order founded by Loyola called *Jesuits?* C.

9. What was the name of the first vessel launched in Massachusetts Bay, and when? A. L. F.

10. What is the English of the following epitaph of date 472? X.

> LEVITAE CONIVNX PETRONIA FORMA PVDORIS
> HIS MEA DEPONENS SEDIBVS OSSA LOCO
> PARCITE VOS LACRIMIS DVLCES CVM CONIVGE NATAE
> VIVENTEMQVE DEO CREDITE FLERE NEFAS.

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MISCELLANEOUS

NOTES AND QUERIES,

WITH ANSWERS.

" *Whatsoever on earth existeth, in a seven it consisteth.*" — WUEFFBAIN.

VOL. VI. DECEMBER, 1889. No. 11.

TWELVE GRAND POINTS OF MASONRY. I was received into Masonry on the " five points of fellowship," but recently saw a reference to the " twelve grand points of Masonry." What are these ? O.

The old English lectures contain the following passage :

" There are in masonry twelve original points, which form the basis of the system, and comprehend the whole ceremony of initiation. Without the existence of these points, no man ever was, or can be, legally and essentially received into the order. Every person who is made a mason must go through all these twelve forms and ceremonies, not only in the first degree, but in every subsequent one."

Important as our ancient brethren deemed the explanation of these points, the Grand Lodge of England thought proper, in 1813, to leave them out of its ritual, and as they were never introduced into this country, a synopsis of them may be given here, taken from A. G. Mackey's " Lexicon of Freemasonry," p. 506. These twelve points of the ceremony of initiation refer to the twelve tribes of Israel in the following manner :

1. To Reuben was referred the *opening* of the lodge, because he was the first-born of his father.
2. To Simeon was referred the *preparation* of the candidate, because he prepared the instruments of destruction for the slaughter of the Shechemites.
3. To Levi was referred the *report*, because he gave a signal or report to his brothers when they assailed the men of Shechem.
4. To Judah was referred the *entrance* of the candidate, because this tribe first entered the promised land.
5. To Zebulun was referred the *prayer*, because the prayer and

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blessing of his father was conferred on him in preference to his brother Issachar.

6. To Issachar was referred the *circumambulation*, because as an indolent and shiftless tribe they required a leader to advance them to an equal elevation with the other tribes.

7. To Dan was referred the ceremony of *advancing* to the altar, as a contrast of the rapid advance of that tribe into idolatry.

8. To Gad was referred the *obligation*, because of the vow of Jeptha, a member of that tribe.

9. To Asher was referred the time the candidate was *instructed*, because Asher, by the fertile soil of its district, was represented by fatness and royal dainties, which was compared to the riches of masonic wisdom which the candidate then received.

10. To Naphtali was referred the *investment*, when the candidate, having received his apron, was declared free, because the tribe of Naphtali had a peculiar freedom attached to them in conformity to the blessing pronounced by Moses.

11. To Joseph was referred the *north-east corner*, because as this reminds us of the most superficial part of masonry so the two half tribes, Ephraim and Manasseh, of which the tribe of Joseph was composed, were accounted more superficial than the rest, inasmuch as they were only the grandsons of the patriarch Jacob.

12. To Benjamin was referred the *closing* of the lodge, because he was the last son of Jacob.

These points, as, before observed, are now obsolete, yet they afford instruction, and will be found worthy of study.

KORESHAN SCIENCE. (Vol. VI, p. 416.) "Koreshan science is the doctrine of Divine Life in all its twelve degrees. It explains by natural law all the so-called mysteries of nature. It finds a place in the economy of life for every condition of mind and matter. It settles all truth in good, and establishes its doctrines in accordance with strict science. It is a scientific religion. It harmonizes all domains of nature in all their degrees. It finds the source and center of being, the garden of Eden, the tree of life, and the fruit of that tree. It demonstrates in science the difference between life in God and life in man. Its fundamental law is transmutation, the transmuting point being the origin of motion in universal substance. It makes God and man the center and circumference of being, and of all science. It gives the law by which this universal substance transmutes from one degree to another, and from one domain to another, either in evolution or involution. It promulgates every law involved in healing disease, whether of the soul or body. Koreshan science is an

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absolute and perfect knowledge of God in all His methods of operations. It is a new science to this age."

Koreshan is from the Hebrew word *Koresh*, the root of which is *Koor*. The word is new and cannot be found in the dictionaries. The literal meaning of the root *koor* is " a furnace, a place of burning, a smelting or refining place." Another degree of meaning is a place into which substances flow to be changed, refined, and converted into other substances and forces. Hence it means the sun, the center of the universe. Koreshan science involves the source of love and wisdom, the transmuting center of the spiritual world, and to know it, give one life and immortality. A very full account of this new science is given in a royal octavo pamphlet on " Koreshan Science," as well as in the *Guiding Star*, the organ of the Koreshan College, Chicago.

MEANING OF " CALIFORNIA." (Vol. VI, 236, 370.) Watson Fell Quinby, M. D., in his pamphlet on " Ophir," says the word California means " beautiful harbor," from *Kalos*, beautiful, and *Phornai*, harbor, the bay being the most beautiful harbor in the world; *phonai* being from *phero*, to bear, and *nai*, ships. He further says Alaska is from *Halaska*, wandering; Oregon from *Oreiganon*, a mountain; Caliveras, *Kalai beros*, house of the cloak: Stanislaus, *Stania laus*, to enjoy a feast; Yosemite, *Uo Semata*, great waterfalls; Truckee, *Trochia*, a wheel road; Mokalomy, *Megaloma*, magnificent; Sonoma, *Sunnomas*, pasturing; Mariposa, *Mara Posa*, great portion.

EPITAPH OF 472. (Vol. VI, p. 396.) The epitaph of A. D. 742, is rendered in English as follows:

" I, Petronia, the wife of a deacon, the type of modesty, lay down my bones in this resting place. Refrain from tears, my sweet daughters and husband, and believe that it is forbidden to weep for one who lives in God."

FIRST VESSEL LAUNCHED IN MASSACHUSETTS BAY. (Vol. VI, p. 396.) This vessel was the " Blessing of the Bay," launched July 4, 1631.

Why are some cats called " tabby cats "? Is it from the woman's name Tabitha? INQUIRER II.

The term, " Tabby Cat," is derived from Atab, a famous street in Bagdad, inhabited by the manufacturers of silken stuffs called Atabi, or taffety, the waving marking of watered silks resembling a cat's coat.

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THAT "ANCIENT PRAYER." Where can be found the ancient litany to the Virgin Mary, so much revered in the eighth century among the Irish? SEARCHER.

The ancient Irish litany was rescued from oblivion by Prof. Eugene O'Curry, who deceased about 1862. It was translated from the Irish tongue into Latin and English, and published with the original Irish text by Richard J. Whyte, New York, 1880. The prayer is as follows:

O Great Mary,
Mary, greatest of Marys,
Most great of women,
Queen of the angels,
Mistress of the heavens,
Womam full and replete with the grace of the Holy Spirit,
Blessed and most blessed,
Mother of eternal glory,
Mother of the heavenly and the earthly Church,
Mother of love and indulgence,
Mother of the golden light,
Honor of the sky,
Harbinger of peace,
Gate of heaven,
Golden casket,
Couch of love and mercy,
Temple of the Divinity,
Beauty of virgins,
Mistress of the tribes,
Fountain of the gardens,
Cleansing of sins,
Washing of souls,
Mother of orphans,
Breasts of the infants,
Refuge of the wretched,
Star of the sea,
Handmaid of God,
Mother of Christ,
Abode of the Godhead,
Graceful as the dove,
Serene like the moon,
Resplendent like the sun,
Destruction of Eve's disgrace,
Regeneration of life,
Perfection of women,
Chief of the virgins,
Garden enclosed,
Fountain sealed,
Mother of God,
Perpetual virgin,
Holy virgin,
Prudent virgin,
Serene virgin,
Chaste virgin,
Temple of the Living God,
Throne of the Eternal King,
Sanctuary of the Holy Spirit,
Virgin of the root of Jesse,
Cedar of Mount Lebanon,
Cyprus of Mount Sion,
Crimson rose in the land of Jacob,
Fruitful like the olive,
Blooming like the palm,
Glorious sun-bearer,
Light of Nazareth,
Glory of Jerusalem,
Beauty of the world,
Noblest born of Christian people,
Queen of life,
Ladder of heaven.

CORK ON A GLASS FULL OF WATER. (Vol. VI, p. 348.) Mr. Gholson must be joking, as the center of the liquid is *not* the "highest part," and a cork does not "remain in the center" being quickly attracted to the side of the glass. DJAFAR.

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ORDER OF JESUITS. (Vol. VI, p. 396.) The Jesuits are so named because they so often repeat the name *Jesus* in their ceremonies and prayers.

THE HEBREW AND ENGLISH ALPHABET IN THE BIBLE. (Vol. VI, p. 369.) When you speak of the alphabet all being found in Ezra VII, 21, do you mean the Hebrew or English alphabet? B. G.

We mean the English (except the letter J). The exact number of books, chapters, verses, and letters in the Bible have been noted by different persons, yet they vary sometimes, either from counting, or from typographical errors in copying from one account to another.

Pergignan's manuscript has the following for the Pentateuch :

	Great Sections.	Small sections.	Verses.	Words.	Chapters.
Genesis,	12	43	1,534	20,713	78,100
Exodus,	11	33	1,209	———	63,467
Leviticus,	10	25	859	11,902	44,989
Numbers,	10	33	12,88	16,707	62,529
Deuteronomy,	11	31	955	16,304	54,892

The Hebrew alphabet is contained in the Old Testament as follows :

Aleph,	42,377	Lamed,	41,517
Beth,	38,218	Mem,	77,778
Gimel,	29,537	Nun,	41,696
Daleth,	32,530	Samech,	13,680
He,	47,554	Ain,	20,175
Vau,	76,922	Pe,	22,725
Zain,	22,867	Tzaddi,	21,882
Cheth,	23,447	Koph,	22,972
Teth,	11,052	Resh,	22,147
Jod,	66,420	Shin,	32,148
Caph,	48,253	Tau,	59,345
		Total,	815,240

The Old and New Testament are said to be composed as follows :

	Old Testament.	New Testament.	Total.
Books,	39	27	66
Chapters,	929	260	1,189
Verses,	23,214	7,959	31,173
Words,	592,439	181,253	773,692
Letters,	2,728,100	838,380	3,566,480

Apocrypha : Chapters, 183 Verses, 6,081 Words, 153,185

Number of English letters in the Old Testament, 2,728,100
Number of Hebrew letters in the Old Testament, 815,240
Excess of English letters over Hebrew, 1,912,860

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AUTHORS OF ANONYMOUS BOOKS. Each decade of the nineteenth century has developed a very philosophical class of literature in untrodden fields of research. Many of these works have appeard anonymously, but why, is best known to the authors of such works. Probably to a certain extent it may be on account of the theoretical domain the works generally traverse. Some of these authors have subsequently thrown off their anonymity, some by force to maintain their rights, others to establish their authorship against plagiarists, while a few are never discovered. The author of "Vestiges of the Natural History of Creation," for a number of years, remained anonymous, but finally has been shown to be Robert Chambers, of Edinburgh.

There are a class of books in my possession, of much interest to me, the authorship of which I have desired to know, and a few of which has been announced. For examples :

"Earth not a Globe," by "Parallax," the founder of Zetetic Astronomy. First edition, 12mo, pp. 16. Birmingham, Eng., 1849. Second edition, 12mo. pp. 430. London, 1873. By *Samuel Briley Rowbotham.* (See N. AND Q., Vol. VI, p. 379.)

"Restoration of the Earth's Lost History. The Past, Present, and Coming State of Our Globe ; the Revolutions through which it Passes from its Birth to its Death or Disolutions. By *John Howard Carey.* 8vo. pp. 134. San Francisco, 1868.

"Theory of Human Progression, and Natural Probability of a Reign of Justice." 12mo. pp. 528. Boston, 1851. By *Patrick Dove.*

"The True Organization of the New Church, as Indicated in the Writings of Emanuel Swedenborg, and Demonstrated by Charles Fourier." 12mo. pp. 454. New York, 1848. By *Charles Julius Hempel.* (See dedication of "Homœopathy, a Theoretic Demonstration with Social Applications." By Marx Edgeworth Lazarus, M. D., New York, 1851.)

"Vestiges of Civilization ; or, the Ætiology of History : Religious, Æsthetical, Political, and Philosophical." 12mo. pp. 416. New York, 1851. By *James O'Connell.* (See article by A. L. Leubuscher, in N. AND Q., Vol. V, p. 33, 1888.)

Now, will some one inform us of the authors of the following anonymous works ?

"Apocatastasis (*Restitution*) ; or, Progress Backward." A New "Tract for the Times." 8vo. pp. 203. Burlington, Vt., 1854.

"An Essay on Transcendentalism." 12mo. pp. 104. Boston, 1842.

"A Statement of the Trinitarian Principle, or Law of Tri-Personality." 8vo. pp. 123. Boston, 1863.

"A Theory of the Universe." 8vo. pp. 91. New York, 1868.

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" Beneficence of Design in the Problem of Evil, Vindicated by the Law of Causation in the Physical Construction of Matter." (By " A Journeyman.") Tenth Bridgewater Treatise. 12mo. pp. 213. New York, 1849.

" Civilizarion : Is its Cause Natural or Supernatural ? An Inquiry by a Wayfarer in Search of the Truth." 8vo. pp. 140. Philadelphia, 1879.

" Great and Grave Questions for American Politicians, with a Topic for America's Statesmen." By " Eboracus." 8vo. pp. 122. New York, 1865.

" Exeter Hall. A Theological Romance. 'What is Truth ?'" New York, 1869.

" Flatland, a Romance of Many Dimensions." By " A Square." 12mo. pp. 155. Boston, 1885.

" Manifest Destiny ; or, the World a Republican Structure on the Rock Basis of the Truth in Christ whose Legend is the Universal Prevalence of Freedom, Unity, and Peace on Earth." By " Sosiosch." 8vo. pp. 159. New York, 1869.

" Mind, Life, and Motion ; with the Law of their Relations to Matter." 8vo. pp. 77. New York, 1857.

" Problem of Life and Motion ; An Exile." 8vo. pp. 129. New York, 1859.

" Prometheus in Atlantis ; A Prophecy of the Extinction of the Christian Civilization." 12mo. pp. 318. New York, 1867.

" Relics from the Wreck of a Former World ; or, Splinters Gathered on the Shores of a Turbulent Planet." Appendix, " Scenery in a Patch of Infinite Space." 8vo. pp. 96. New York, 1847.

" The Mysteries of Isis ; or, The Science of Mythematics." Translated from the original mythic symbols. By " Uniche." 16mo. pp. 312. New York, 1858.

" The Ideal Man ; A Conversation between Two Friends upon the Beautiful, the Good, and the True, as Manifested in Actual Life." By " A Philokalist." 12mo. pp. 160. Boston, 1842.

" The Panidèa ; or, An Omnipresent Reason Considered as the Creative and Sustaining Logos." By " Theoptes." 8vo. pp. 196. Boston, 1846.

" The Position. Elemental and Physical—Normal and Planetary—Moral, Constitutional and National. A Thesis pending the diploma of the order when the issues therein take hold upon the earth." By " Cyrus the Elamite." 8vo. pp. 65. Louisville, Ky., 1879.

" The Problem of American Destiny Solved by Science and History." 12mo. pp. 78. Boston, 1863. LOGOS.

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QUESTIONS.

1. What is the meaning of the word "Thalassopkletes, quoted on the title-page of a pamphlet on the "Soul and Spirit," published at Manchester, England, in 1879? HOWARD.

2. Freemasons are instructed that Lodges are dedicated to the "Holy Saints John at Jerusalem." Knights Templar are instructed that Commanderies are dedicated to "Saint John of Jerusalem." A. G. Mackey says (Lexicon of Freemasony, p. 110) that Past Masters' Lodges should be dedicated to the "Saints John." These Johns are John the Baptist, John the Evangelist, and John the Almoner. Give each personage as intended above. Also, explain "Johannite Masonry." NEOPHYTE.

3. Why is the Grand Lodge of Masons of Germany called the "Three Globes"? M. M.

4. Who was the real "Peter Porcupine," who wrote several pamphlets nearly a hundred years ago, one "The Life and Adventures of himself, with a full and fair account of all his Authoring Transactions, being a sure and infallible guide for all enterprising young men who wish to make a fortune by writing pamphlets"? ANDREW.

5. Was William Tell of Swiss renown, a real or mythic personage? MORTON.

6. Can there be in mathematics *a negative square?* H.

7. The Thomists, we are told by Brande, were the followers of Thomas Aquinas. Why did they take their name from his christian name Thomas, rather than from his surname Aquinas — *Aquinists* or *Aquinasians?* LOGOS.

8. What explanation has been given to the "seven coils of the serpent," which Æneas had engraved on the tomb which contained the remains of his father Anchises? CLASSIC.

9. When and where are the games of *chance* first recorded in history, lots, dice, or lottery, etc. WILL.

10. It is said that some relate that Solon (one of the seven wise men of Greece) added one line in Homer's "catalogue of the ships," in the *Iliad*, Bk. II, l. 674. Solon repeated, "Ajax from Salamis twelve ships commands," and then added, "And ranks his forces with the Athenian power." Pope translates it, "And with the great Athenians join their force." What authority is there that Solon inserted the line credited to him? CRITIC.

11. Who first divided the starry heavens into constellations, and gave the names to the constellations as we now have them? W.

12. Where in the Bible is found the paraphrase, "Thou shall not repeat the secret name of thy God IEUE?" QUARTUS.

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CATALOGUE OF PUBLISHED WORKS OF

Thomas Lake Harris.

HYMNS, SONGS, EPICS, LYRICS, ETC.

Epic of the Starry Heaven. "Hereafter ye shall see heaven open." 12mo. pp. 210. cloth. New York. 1854. Introduction by S. B. Brittan. The poem contains 4,000 lines, and Mr. Brittan says it was communicated in a trance state in 26 hours and 16 minutes.

Hymns for Spiritual Devotion. "And suddenly there was with the Angel a multitude of the heavenly host praising God, and saying, Glory to God in the highest, and on earth peace, good will to men.'" Parts I and II. 16mo. pp. 293. cloth. New York. 1858.

The Song of Satan. A series of poems, originating with a society of infernal spirits, and received, during temptation-combats. Appendix to the Arcana of Christianity. "Remember now thy Creator in the days of thy youth, while the evil days come not, nor the years draw nigh, when thou shalt say, I have no pleasure in them." 8vo. pp. 107. cloth. New York. 1858.

Regina; a Song of Many Days. "My sheep know my voice." Dedicated: To Stephanie, doubly endeared by kindness and by worth. 8vo. pp. 229. cloth. London. 1860.

The Great Republic; a Poem of the Sun. "I saw an angel standing in the sun." Dedication: To the Brotherhood of the New Life in Europe, Asia, and America. Parts I to XII. 12mo. pp. 262. morocco. Gilt. New York and London. 1867.

Lyric of the Morning Land. "In my father's house are many mansions." To the pure in heart. Mr. S. B. Brittan says this poem was communicated in a trance state in January, 1854, the entire time being about 30 hours. It was first published in New York, in 1855. Part I, Pallas; Part II, Hesperus; Part III, The Sun. 12mo. pp. 172. cloth. First European edition. Glasgow, 1869.

Lyric of the Golden Age. "And I saw a new earth." Introduction by S. B. Brittan. Mr. Brittan says the poem was communicated in a trance state at different times between December, 1854, and July, 1855, the entire time being 94 hours. It was first published in New York in 1856. 12mo. pp. 304. Parts I to VI. cloth. First European edition. Glasgow. 1870.

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BROTHERHOOD OF THE NEW LIFE.

The Breath of God with Man ; an Essay on the Grounds and Evidences of Universal Religion. " He breathed on them, and saith, 'Receive ye the Holy Ghost.'" Brotherhood of the New Life. 12mo. pp. 184. cloth. New York and London. 1867.

The Golden Child. Songs of Fairyland. Nos. 1 to 52. 8vo. pp. 76.

" Within these leaves we introduce
The wise and merry little people;
To whom a seed may hold a use,
Or flower-bell serve for church and steeple.
Receive them with a tender joy;
Embrace them in the heart's affection;
Man's wintry age they first destroy;
Then weave his robe of resurrection."

The Golden Child. A daily chronicle. Part Second. Wisdom in Council. Nos. 53 to 66. 8vo. pp. 50. Privately printed. 1878.

Gifts of Innocence (Chapters, 67-68. Songs, 69-85). Nos. 67 to 85. 8vo. pp. 56.

The Concept of the Word. Nos. 97 to 104. 8vo. pp. 75. cloth. Lady's day, January 9th, 1878.

Hymns of the Two-in-One for Bridal Worship in the Kingdom of the New Life. Part First. Nos. 1 to 50. 8vo. pp. 48.

Bridal Hours. (Thirty Songs.) Aestivossa, 1875-1878. 8vo. pp. 60. Fountain Grove, January, 1878.

The Lord : The Two-in-One ; Declared, Manifested, and Glorified. This volume was began about February 7, and finished March 4, 1878, for the Brotherhood of the New Life. 8vo. pp. 148. Privately printed. Fountain Grove. 1878.

The Wedding Guest. Jesus-in-Yessa. Printed and published for the Brotherhood of the New Life. 8vo. pp. 108. Fountain Grove, Santa Rosa, California. 1878.

A Voice from Heaven. 8vo. pp. 66. Fountain Grove. 1879. " Behold, the tabernacle of God with men ; and he will dwell with them ; and they shall be his people ; and God himself shall be with them ; their God. And God shall wipe away all tears from their eyes ; and there shall be no more death, neither sorrow, nor crying ; neither shall there be any more pain ; for the former things are passed away."

The Holy City and the Light Therein. Paragraphs 1 to 205 were written in July and August, 1879. Hymns of Man, Nos. 1 to XII, and paragraphs 206 to 624 were written in 1880. 8vo. pp. 229. Privately printed. 1880.

The Luminous Life. Dedication : To the beloved, faithful in affliction. 8vo. pp. 5-128. Autumn, 1882.

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Esoteric Science in Human History. The Wisdom of the Adepts. "In Nature's infinite book of secrecy, a little I have read." 8vo. pp. XXXVI+527. cloth. Privately printed. Fountain Grove. 1884.

Star-Flowers; a Poem of the Woman's Mystery. Vol. I, pp. 197, Canto First, 271 stanzas. Vol. II, pp. 122, Canto Second, 124 stanzas. Vol. III, pp. 125, Canto Third, 288 stanzas. Vol. IV, pp. 121, Canto Fourth, 197 stanzas. Vol. V, pp. 116, Canto Fifth, 243 stanzas. 8vo. Total pp. 681. cloth. Privately printed. Fountain Grove. 1886.

ARCANA.

The Wisdom of Angels. Part I, Chapters I to IX, Section 1 to 33. 12mo. pp. 218. cloth. New York. 1857.

Arcana of Christianity; an Unfolding of the Celestial Sense of the Divine Word. Part First. Vol. I. Genesis — Chapter 1st. "And God said, Let there be Light." 8vo. pp. 496 + Appendix LXXXVII. cloth. New York. 1868. "This volume was dictated in the city of New York during the months of October and November, 1857."

Arcana of Christianity; an Unfolding of the Celestial Sense of the Divine Word. Part Third. Vol. I. The Apocalypse. "The time is at hand." Brotherhood of the New Life. New York and London. 8vo. pp. 488. cloth. 1867.

The Conjugial Sisterhood in the New Life. (Extracted from the "Arcana of Christianity — The Apocalypse," Vol. I.) 12mo. pp. 12.

SERMONS.

Recognition of Friends in Heaven. A sermon preached in Mechanics' Institution, Manchester, Sunday evening, October 16, 1859. 12mo. pp. 21. London. 1860.

Juvenile Depravity and Crime in our City. A sermon preached in Stuyvesant Institute, New York, Sunday morning, January 13, 1850. 8vo. pp. 13. New York. 1850.

1. Modern Spiritualism, with appendix; 2. Christ Incarnate; 3. Liberty and Progress; 4. Heart Wants of London. Sermons preached in Store-Street Music Hall, London. 16mo. pp. 72. London, 1860.

1. Modern Spiritualism, with appendix; 2. Heart Wants of London; 3. Christ Incarnate; 4. Liberty and Progress; 5. Probable Grounds of Christian Union; 6. The New Church, its Spirit, Scope, and Mission. Discourses preached in England. 16mo. pp. 164. cloth. New York. 1860.

The New Jerusalem, the Crown of Churches and the Glory of the World. Preached in the Mechanics' Hall, Nottingham, Wednesday, March 14, 1860. 12mo. pp. 47. London. 1860.

Moses an Example for Present Imitation. A sermon preached in Marylebone Institute, London, Sunday evening, June 10, 1860. 8vo. pp. 22. Manchester. 1860.

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Truth and Life in Jesus. Sermons preached in Mechanics' Institution, Manchester, October, November, and December, 1859: 1. Love; 2. Divine Charity; 3. Philosophy of Decay; 4. Recognition of Friends in Heaven; 5. Last Words of Jesus; 6. the Ideal and the Actual; 7. Christian Pilgrim's Progress; 8. Peril and Safety in the Path of Life; 9. Relation of Faith and Charity; 10. Our Future. 16mo. pp. 200. cloth. New York. 1860.

Modern Spiritualism; its Truths and its Errors. A sermon preached in Marylebone Institute, London, Sunday morning, January 15, 1860. 12mo. pp. 39; appendix: Mediumship in its connection with the two-fold life of man. 12mo. pp. 9. New York. 1860.

Revolutions that Precede the Millennium. A sermon preached in Marylebone Institute, London, Sunday morning, February 12, 1860. 12mo, pp. 16. London. 1860.

Aims and Issues of the New Church; pp. 16. The Mission of the New Church, and how it is to be accomplished; pp. 24. 12mo. Glasgow. 1863.

PUBLICATIONS ON THE NEW LIFE.

The Herald of Light A Monthly Journal of the Lord's New Church. Began May, 1857. Vols I to VI. 1857-1861. 8vo.

"The New Time." In cyclostyle manuscript. Quarto. pp. 8. Glasgow, May, 1887. Containing "A Hymn of the Battle," and "Overture," from Regina, a song of Many Days, by T. L. H. Published by John Thomson, Glasgow.

"The Univercœlum Illustrated." Vol. I, Nos. 1, 2, and 3. May 1, June 1, and 20, 1883. "To thee and thine, Thy will Most High God, be done." This journal contains chapters from "The Wedding Guest," and "The Lord: The Two-in-One." Published by N. A. T. Brown, San Francisco, Cal.

"Life: The Fundamental Principle of all Phenomena." A lecture by Arther A. Cuthbert. Printed for private circulation. 8vo. pp. 30. Glasgow. 1887. Designed to enlighen those who would know the path that leads the soul upward, and for the Brotherhood of the New Life.

Wanted—The following Works by T. L. Harris.

The Golden Child. Part IV. (Containing sections Nos. 86 to 96.)
Sermons on the Millennium. (Containing twelve discourses.)
Miscellaneous Sermons. Cloth. 16mo.
First Book of the New Church.
First Book of the Christian Religion. 24mo. pp. 175.
Power and Glory of the Church of Christ. 16mo. pp. 37.
The New Church seen in its Doctrine of Regeneration. 16mo. pp. 24.

The Herald of Light. *Want.* — Vol. I. Nos. 1, 3, 5, 6, 7, 8, 9, 10, 11, 12. Vol. III. Nos. 1, 2. 3, 4, 5, 6. Vol. IV. Nos. 1, 2, 3, 4, 5, 6. Vol. V. Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9. Vol. VI. Nos. 1, 2, 3, 4, 5, 6.

S. C. GOULD, Manchester, N. H.

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THE BIZARRE.

NOTES AND QUERIES

A MONTHLY MAGAZINE OF

HISTORY, FOLK-LORE, MATHEMATICS, MYSTICISM, ART, SCIENCE, Etc.

"It neither speaks nor hides, but signifies."—*Hereclitus.*

VOLUME VI.

CONDUCTED AND PUBLISHED BY
S. C. & L. M. GOULD,
MANCHESTER, N. H.
1889.

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cur f w d dis and p
A sed iend rought eath ease ain.
bles fr b br and ag

Seven hours to law,—to soothing slumber seven,—
Ten to the world alot,—and all to heaven.

Qu an tris di c vul stra
os guis ti ro um nere vit.
H san Chris mi t mu la

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PREFACE.

Again, we are to prefix a few words by way of preface. Many of the thoughts in the present volume may seem new; yet the larger part of them are not our own. We believe some of the oligies that have been discarded for centuries past, and had become well nigh obsolete, will yet be searched out and flourish in the coming decades; yea, they will be like "the stone which the builders rejected," unearthed and become "the head of the corner." It has become a sort of second nature with us to look for this stone in all quarters. We are sometimes led into discredited literature for sources of information. We disire "to pick up pearls wherever found," and give them to the world. Whenever it is shown that we are not original, so much the better. No one lifetime is sufficient to solve all the problems of the universe. Some begin the solution, while others carry it forward, for others still to finish, perhaps. For, after some facts are found, the method of science consists in assuming a hypothesis to account for them; and if that hypothesis serves the purpose, it passes over to a theory, and in time is received as the truth in the case, and thus many problems are solved. Knowledge, however, is progressive, and the car of science moves onward.

A day will come when many things which may now seem novel and paradoxical, will be acknowledged by enlightened man as the actual and positive, and the embodiment of philosophy itself. A Morse pioneered the telegraph, but now an Edison walks arm in arm with Jupiter. The present time seems to be the passing into an age of physical and mental light. Many persons believe it to be that time in which "new order of things" are to prevail, as spoken of by Virgil:

> Magnus ab integro saeclorum nacitur ordo;
> Jam nova progenies cœlo dimittitur alto.

Thomas Browne, the philosopher of Norwich, wrote about order: "All things began in order; so shall they end, and so shall they begin again; according to the ordainer of order, and mystical mathematics of the city of heaven."

Young exclaims, in "*Night Thoughts*, "How much is to be done!" so one might exclaim in reference to the contents of this monthly,

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"How much is to be answered!" Yea, the laborers are few compared to the readers. "Search all *writings*," for wisdom. Write out the facts, as James O'Connell puts it, "biographically, empirically, scholastically, philosophically, or scientifically," and forward the desired information.

Carlyle has left the following remark, as the key of all past time:

"In books lies the soul of all past time — the articulate, audible voice of the past, when the body and the material substance of it has altogether vanished like a dream. No magic *Rune* is stranger than a book. All that mankind has done, thought, gained or been, is lying in magic preservation in the pages of books. Do not books still accomplish miracles as *Runes* were fabled to do? They persuade men."

Many books are old friends whose memories long cling to the heart. Thomas Moore has beautifully expressed their memories in his poem entitled *Farewell*:

> "Long, long be my heart with such memories filled,
> Like the vase in which roses have once been distilled;
> You may break, you may shatter the vase if you will,
> But the scent of the roses will cling round it still."

S. C. & L. M. Gould.

MANCHESTER, N. H., December, 1889.

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